

Enclosure D  
Information Request  
Franklin Street Groundwater Site

**DECLARATION**

I declare under penalty of perjury that I am authorized to respond on behalf of the Respondent and that the foregoing is complete, true, and correct.

Executed on August 12, 2019

Todd Zellers

Signature

Todd Zellers

Type or Print Name

President

Title

Request for Information Pursuant to Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

**Franklin Street Groundwater Site, Spencer, Indiana**

Property Address 840 West Hillside Avenue, Spencer, Indiana 47460

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## **Overview**

Stello Products, Inc. has been at the present location of 840 West Hillside Ave., since the building was fabricated in 1965. Its primary function has been the fabrication and distribution of traffic control products. The primary focus of fabrication has been traffic control signs.

Fabrication consists of four primary areas:

**Metal fabrication** – raw aluminum sheet is sheared, cleaned, conversion coated and prepared for sign fabrication.

**Painting** – Treated aluminum sign blanks and plastic sign blanks are painted in a water filtered paint booth.

**Reflective sheeting application/finished sign assembly** – Aluminum or plastic sign blanks are applied with reflective sign sheeting, transparent film or vinyl in preparation for silk-screening or becoming a finished sign.

Our shipping area assembles orders and boxes or skids signs for shipment.

### ***Enclosure C Information Request:***

1) Persons consulted:

John Hackworthy – Landowner and President of Stello Products from 1963 until 2007.

Todd Zellers –President of Stello Proudcts, Inc. from 2007 to present.

2) Documents consulted:

Current Material Safety Data Sheets (See Appendix I for MSDS)

3M -- Inks, Thinners

Nazdar – Inks

Madison Chemical – Conversion Coating cleaners and chemicals

Superior Solvents – Solvents

Analytical Reports of disposed wastes

Superior Solvents (See Appendix II analytical reports, waste manifests)

Manifests of disposed wastes (See Appendix II for waste manifest reports)

Superior Solvents

Liquid Waste Removal

Stello Products purchase history from the past seven years for 3M, Madison Chemical, Nazdar, and Superior Solvents for production. (See Appendix III for purchase history)

3) Not applicable

4) EPA Number INR 000103655

5) Not applicable

6) Persons with knowledge of hazardous substances:

John Hackworthy

Todd Zellers

Greg Summerlot, Shop Foreman

John Summerlot, current employee and previous Shop Foreman

7) Hazardous Substances are used at Stello Products.

- a) Material Safety Data Sheets (See Appendix I for MSDS)
- b) Material Safety Data Sheets (See Appendix I for MSDS)
- c) Hazardous Substances are used in the following areas:

1) Metal Fabrication – Conversion coating tanks are used with DART 153 as an acidic cleaner to treat sheet aluminum. Dart 169 is used to produce a conversion coating of chromate type. These chemicals are stored in polycarbonate drums on spill skids. (See Appendix III for purchase history.) We have purchased 7 55 gallon drums of Dart 153, 2 55 gallon drums of Dart 169 and 6 55 gallon Drums of Neutralizer Since 2012.

Our Dart 153 tanks are neutralized and pumped approximately once every two years. Our Dart 169 tank is added to occasionally increase effectiveness. Any spills or overflows are contained with our spill kits in house and placed in polycarbonate drums. We have has approximately two drums of spill in the past 50 years. Any spillage is disposed of by Superior Solvents or Liquid Waste Removal (See Appendix II).

2) Painting – We use Sherwin Williams paints in our water filtered spray paint booth. Paints are stored in a flammable safety storage cabinet. (See Appendix III for purchase history.) The booth is cleaned approximately once every two years and excess paint liquid and sludge are disposed of in steel drums by either Superior Solvents or Liquid Waste Removal Company. Spills are contained by using our spill containment kits and residue is put into our drums for disposal by either Superior or Liquid Waste Removal. We dispose on average four drums a year.

3) Silkscreen – We use either 3M or Nazdar silkscreen inks in our Silkscreen department. Inks and thinners are stored in two flammable safety storage cabinets. (See Appendix III for purchase history) Screens are cleaned using various solvents (mineral spirits, xylene, toluene). Most excess is cleaned using waste rags that is disposed of weekly by Cintas. All liquid excess is either reused or placed in steel paint/ink/thinner drums for disposal by Superior Solvents or Liquid Waste Removal. We dispose on average ½ drum annually.

- d) These materials have been used at the Stello Products location since its inception at the current location
- e) See breakdown of current departments at the facility in section c.
- f) See purchase history and disposal history for products used in section c (Appendix II and III).

8) Stello has Superior Solvents and Liquid Waste Removal transport Liquid Waste and paint solids from the site. No waste is transported to our facility.

9) Stello Products, Inc. has been at the present location of 840 West Hillside Ave., since the building was fabricated in 1965. Its primary function has been the fabrication and distribution of traffic control products. More specifically traffic control signs.

Fabrication consists of four primary areas:

Metal fabrication – raw aluminum sheet is sheared, cleaned, conversion coated and prepared for sign fabrication.

Painting – Treated aluminum sign blanks and plastic sign blanks are painted in a water filtered paint booth.

Reflective sheeting application/finished sign assembly – Aluminum or plastic sign blanks are applied with reflective sign sheeting, transparent film or vinyl in preparation for silk-screening or becoming a finished sign.

Our shipping area assembles orders and boxes or skids signs for shipment.

Receiving hazardous materials is done via our hazard communication standard.  
(See Appendix IV Stello Products Hazard Communication Standard)

10) John Hackworthy is the property owner and has leased the building to Stello Products since 2007 upon new ownership (Todd Zellers). (See Appendix V for deed and lease documents)

#### 11) Property Information

- a) Legal Property Description: Commencing to a point which is 245 feet West of the Northeast corner of Lot No. 21 in Beem's Second Edition to the Town of Spencer, Indiana, said point being on the North Line of Lot No. 22 in said edition, and running thence East 170 feet to the Northwest corner of said Lot Number 21 and thence continuing East on the North line of said Lot No. 21, 30 feet for a total distance of 200 feet from the place of the beginning; thence South 146 feet, more or less, to the center of the alley; thence West 200 feet to a of beginning, being a part of Lots 21 and 22 in Beem's Second addition to the Town of Spencer
- b) Underground Utilities (Electrical and telephone are above ground. Gas and Sewer are indicated approximately on building drawing). (See Appendix VI building drawing)
- c) Structures (see Appendix VI building drawing)
- d) n/a
- e) Sewer location and drain location is building map (Appendix VI building drawing)

- f) n/a
- g) Blueprints (none available to our knowledge)

12) N/A

13) John Hackworthy has been the landowner since 1990. Prior to the ground was owned by Lester Lewis and the building was fabricated and owned by the Spencer Improvement Corporation. John Hackworthy leased to buy the property and building beginning in 1965.

14) No prior operators

15) None granted

16) No

17) No

18) N/A

19) No

20) An overflow of our Dart 153 tank occurred in 2016. Materials were contained using our spill containment kit and placed in polycarbonate drums for disposal. Two drums of waste were contained and disposed of.

21) No

22) No

23) No

24) None

## **Appendix I**

### ***Material Safety Data Sheets***

Material Safety Data Sheets		
MFG	NUMBER	DESCRIPTION
MADISON CHEMICAL	616901	DART 169
	615301	DART 153
	783501	NEUTRALIZER LCS
NAZDAR	59LF124	BRILLIANT ORANGE
	59LF102	FIRE RED
	59204	BRIGHT RED
	59111	BLACK
	971904	FIRE RED
	97LF2004	BRILLIANT ORANGE
	9724	BLACK
	RE180	THINNER
	795204	OPAQUE BLACK
	791904	FIRE RED
SHERWIN WILLIAMS	B54EF403	SAFETY ORANGE
	F78XXR10852-1434	PANTONE 209
	F77XXR3123-1407	STELLO RED
	F78XXW6811-1407	STELLO WHITE
	F78XXY3033-1407-1434	FEDERAL YELLOW
	F78XXG3705-1407-1434	SIGN GREEN
SUPERIOR SOLVENTS	KETONE	KETONE
	XYLENE	XYLENE
	MINERAL SPIRITS	MINERAL SPIRITS
	TOLUENE	TOLUENE
	S-0211	SOLVENT BLEND
3M	990-05	BLACK
	990-12	RED
	991	THINNER/RETARDER
	892	FLOW ADDITIVE
	885I	BLACK
	888I	GREEN
	882I	RED
		REVISED MAY 2019



## TECHNICAL DATA SHEET

### **DESCRIPTION:**

**NEUTRALIZER LCS** is a concentrated alkaline liquid for neutralizing acid solutions or simply raising the pH of solutions. **NEUTRALIZER LCS** is completely water soluble and quickly neutralizes acid solutions.

### **PROPERTIES:**

Appearance:	Off-white viscous liquid with a mild odor.
Specific Gravity:	1.52
pH (100%):	11.9 – 12.1
pH (1% by Volume):	12.7 – 13.0

### **APPLICATION:**

If you have the capability of titrating the acid system to be neutralized, 1 gallon of **NEUTRALIZER LCS** will provide approximately 4.4 pounds of available sodium oxide ( $\text{Na}_2\text{O}$ ) equivalent. **NEUTRALIZER LCS** should be used on relatively cool solutions with a temperature of 100°F. or less. The solution should be mixed or agitated thoroughly while the **NEUTRALIZER LCS** is slowly being added to prevent localized heating. Periodically, check the pH with papers or meter until the desired pH required is achieved. Even a small excess of **NEUTRALIZER LCS** may produce a pH higher than desired.

When **NEUTRALIZER LCS** is used to rinse the pH of a solution only slightly, it is typically added at the rate of 1 pint to 1 quart per 500 gallons of solution. Mix thoroughly, check pH and repeat process until pH required is achieved.

Contact your Madison Chemical representative for details to fit your operation.

### **PRODUCT CAUTIONS:**

Danger! Causes severe burns to skin, eyes and alimentary canal. Fatal if swallowed. Contains sodium hydroxide, a strong alkaline material. During use, wear goggles, face shield, butyl rubber gloves, rubber apron, rubber boots and other equipment as required to avoid contact.

### **EMERGENCY FIRST AID:**

**EYES & SKIN:** Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician. Remove contaminated clothing and shoes. Do not put contaminated clothing and shoes back on. Wash clothing and shoes thoroughly in soap and water; rinse repeatedly in clean water and dry before reuse.

**INGESTION:** Do not induce vomiting. Give water. Never give anything by mouth to an unconscious person. Call a physician.

If use is contemplated for purposes other than, or by methods different from those specifically recommended herein, please contact the manufacturer for advice.

**KEEP FROM FREEZING. STORE ABOVE 45°F.  
FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN.**



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## TECHNICAL DATA SHEET

### DESCRIPTION:

**DART 169 HS** is a concentrated, acidic liquid designed to produce conversion coatings of the chromate-type on aluminum, zinc, and/or cadmium surfaces. The product may be applied through recirculated spray or immersion methods to improve paint adhesion, enhance corrosion resistance, or provide decorative appearance.

**DART 169 HS** has built-in economics and trouble-free operating properties. Solutions normally require little or no adjustments and function over long periods of time. **DART 169 HS** can be fed automatically from the drum to the solution tank.

### PROPERTIES:

Appearance:	Clear, dark red liquid with a mild odor.
Specific Gravity:	1.17
pH (100%):	1.5 - 1.7
pH (1% by volume):	2.0 - 2.2
Foam:	Nil
Equipment:	The processing tank, piping, nozzles and pumps should be constructed of stainless steel, preferably types 316 or 304. Chemical metering pumps should be checked with manufacturer for determination of satisfactory resistance to chromic acid solutions. Typical materials of construction are Teflon, Viton and Hypalon. All tubing should be polyethylene.

### APPLICATION:

The metal to be treated must be suitably cleaned and rinsed (and deoxidized, if necessary) prior to application of the **DART 169 HS** solution. The conversion coating operation must then be followed by thorough cold-water rinsing, and the work dried (to ensure that the coating is "set") before painting or other processing. If coatings are contacted or disturbed while wet, the coating integrity may be impaired. Once the coating is dry, it is relatively hard.

For spray operations, **DART 169 HS** is generally used at 0.5 to 3.0% by volume at 80°F. to 120°F. for 15 seconds to 1 minute. The spray washer should provide high volume, low pressure action for proper coatings. For immersion operations, **DART 169 HS** is generally used at 1 to 5% by volume at 80°F. to 120°F. for 15 seconds to 3 minutes.

High volume production baths occasionally need adjustment with nitric acid and/or Madison Chemical Company's **ADDITIVE F**. Coating formation on aluminum is normally done at a pH = 1.6 to 2.0. Zinc and cadmium usually require a somewhat lower pH range of 1.3 to 1.6.

Contact your Madison Chemical representative for details to fit your operation.

### PRODUCT CAUTIONS:

Danger! Causes severe burns to skin, eyes and alimentary canal. Harmful or fatal if swallowed. Contains chromic acid, nitric acid and fluorides. Ingestion of chromic acid can cause kidney failure. Overexposure to chromic acid may cause cancer. Risk of cancer depends on duration and level of exposure. Wear goggles, face shield and Viton gloves. Wear rubber apron and rubber boots and other equipment as required to avoid contact.

### EMERGENCY FIRST AID:

**EYES & SKIN:** Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician. Remove contaminated clothing and shoes. Do not put contaminated clothing and shoes back on. Wash clothing and shoes thoroughly in soap and water; rinse repeatedly in clean water and dry before reuse.

**INGESTION:** Do not induce vomiting. Give water. Never give anything by mouth to an unconscious person. Call a physician.

**INHALATION:** Remove individual to fresh air. If breathing is difficult, administer oxygen. Call a physician.

Avoid ingestion and physical contact with **DART 169 HS**, its solutions and vapors.

If use is contemplated for purposes other than, or by methods different from those specifically recommended herein, please contact the manufacturer for advice.

**FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN.**



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# DART 153

## TECHNICAL DATA SHEET

### DESCRIPTION:

**DART 153** is a highly concentrated, liquid acidic cleaner that contains a blend of degreasing agents and biodegradable surfactants. **DART 153** cleans, de-rusts, descales and prepares metal surfaces prior to painting. It is also recommended for removing welding flux, tarnish, heat scale and other oxides. **DART 153** may be applied to steel, cast-iron, stainless steel, aluminum, zinc and copper surfaces.

### PROPERTIES:

Appearance:	Clear, water-white to amber liquid with a mild odor.
Specific Gravity:	1.30
pH (100%):	1.7 – 1.9
pH (1% by volume):	1.8 – 2.0
Metal Safety:	Safe on stainless steel and copper metals when used as directed. Some attack on cold-rolled and hot-rolled steel. Controlled etch on zinc and aluminum alloys. Rapidly attacks magnesium.

### APPLICATION:

May be applied by immersion tanks, hand swabbing or brushing. Concentrations vary widely as needed; from 5% to 50% by volume. Temperatures from ambient to 140°F. Follow with water rinsing. Equipment for **DART 153** solutions should be acid-resistant.

Contact your Madison Chemical representative for details to fit your operation.

### PRODUCT CAUTIONS:

Danger! Causes burns to skin, eyes and alimentary canal. Harmful if swallowed. Contains 2-butoxyethanol and phosphonic acid. During use, wear impermeable type gloves, goggles, face shield, rubber apron and rubber boots and other equipment as required to avoid contact.

### EMERGENCY FIRST AID:

**EYES & SKIN:** Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician. Remove contaminated clothing and shoes. Do not put contaminated clothing and shoes back on. Wash clothing and shoes thoroughly in soap and water; rinse repeatedly in clean water and dry before reuse.

**INGESTION:** Induce vomiting. Give water. Never give anything by mouth to an unconscious person. Call a physician.

**INHALATION:** Move subject to fresh air and get medical attention.

If use is contemplated for purposes other than, or by methods different from those specifically recommended herein, please contact the manufacturer for advice.

**FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN.**



**Madison Chemical Co., Inc.**  
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Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code **59LF124**  
Product name **Brilliant Orange**  
Product category **59000 Series SV Enamel Screen Ink**

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Skin sensitization	Category 1A - (H317)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Aspiration toxicity	Category 1 - (H304)
Flammable liquids	Category 3 - (H226)

**Label elements**



Signal Word  
Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
H317 - May cause an allergic skin reaction  
H372 - Causes damage to organs through prolonged or repeated exposure  
H226 - Flammable liquid and vapor



**Precautionary Statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P333 + P313 - If skin irritation or rash occurs. Get medical advice/attention  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P314 - Get medical advice/ attention if you feel unwell  
 P331 - Do NOT induce vomiting  
 P233 - Keep container tightly closed  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P403 + P235 - Store in a well-ventilated place. Keep cool  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Hazards not otherwise classified (HNOC)**

Causes mild skin irritation. Harmful to aquatic life.

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
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**Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
Stoddard solvent	8052-41-3	10 - 30	*	
Barium sulfate	7727-43-7	10 - 30	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	1 - 5	*	
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	*	
2-Butanone, oxime	96-29-7	< 1	*	
Ethyl benzene (constituent)	100-41-4	< 0.5	*	1
Naphthalene (constituent)	91-20-3	< 0.5	*	1
Cobalt Compounds	Trade Secret	< 0.5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note 1. Type of chemical: Constituent

<b>4. FIRST AID MEASURES</b>
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**Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

<b>5. FIRE-FIGHTING MEASURES</b>
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**Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

**7. HANDLING AND STORAGE****Precautions for safe handling****Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

**Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure limits**

Component	ACGIH TLV
Stoddard solvent 8052-41-3	TWA: 100 ppm
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Component	OSHA PEL
Stoddard solvent 8052-41-3	TWA: 500 ppm TWA: 2900 mg/m <sup>3</sup>

Barium sulfate 7727-43-7	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>

Component	OSHA PEL (vacated)
Stoddard solvent 8052-41-3	TWA: 100 ppm TWA: 525 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>

Component	Ontario TWAEV
Stoddard solvent 8052-41-3	TWA: 525 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin

Component	Mexico OEL (TWA)
Stoddard solvent 8052-41-3	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 523 mg/m <sup>3</sup> STEL/PPT-CT: 200 ppm STEL/PPT-CT: 1050 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 150 ppm STEL/PPT-CT: 655 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 125 ppm STEL/PPT-CT: 545 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA/VLE-PPT: 10 ppm TWA/VLE-PPT: 50 mg/m <sup>3</sup> STEL/PPT-CT: 15 ppm STEL/PPT-CT: 75 mg/m <sup>3</sup>

#### Appropriate engineering controls

##### Engineering Measures

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

#### Individual protection measures, such as personal protective equipment

##### Eye/Face Protection

Wear safety glasses with side shields (or goggles). If splashes are likely to occur. Wear

	suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Respiratory Protection</b>	If exposure limits are <b>exceeded</b> or irritation is experienced, NIOSH/MSHA approved respiratory protection <b>should</b> be worn. <b>Respiratory protection</b> must be provided in accordance with current local regulations.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	46 °C / 115 °F	Setaflash closed cup	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1.18		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties	No data available		
Oxidizing Properties	No data available		

### Other Information

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	9.85

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
29.56	No information available	2.91	348.91

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

**Conditions to avoid**

Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible materials**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Inhalation**  
**Eye Contact**  
**Skin Contact**  
**Ingestion**

Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.

Component	Oral LD50
Barium sulfate 7727-43-7	= 307000 mg/kg ( Rat )
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg ( Rat )
Xylenes (o-, m-, p- isomers) 1330-20-7	= 3500 mg/kg ( Rat )
2-Butanone, oxime 96-29-7	= 930 mg/kg ( Rat )
Ethyl benzene (constituent) 100-41-4	= 3500 mg/kg ( Rat )
Naphthalene (constituent) 91-20-3	= 1110 mg/kg ( Rat )

Component	Dermal LD50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2 mL/kg ( Rabbit )
Xylenes (o-, m-, p- isomers) 1330-20-7	> 4350 mg/kg ( Rabbit )
2-Butanone, oxime 96-29-7	1000 - 1800 mg/kg ( Rabbit )
Ethyl benzene (constituent) 100-41-4	= 15400 mg/kg ( Rabbit )
Naphthalene (constituent) 91-20-3	= 1120 mg/kg ( Rabbit )
Cobalt Compounds	> 5000 mg/kg ( Rabbit )

Component	Inhalation LC50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
Xylenes (o-, m-, p- isomers) 1330-20-7	= 29.08 mg/L ( Rat ) 4 h
2-Butanone, oxime 96-29-7	> 4800 mg/m <sup>3</sup> ( Rat ) 4 h
Ethyl benzene (constituent) 100-41-4	= 17.4 mg/L ( Rat ) 4 h
Naphthalene (constituent) 91-20-3	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
Cobalt Compounds	> 10 mg/L ( Rat ) 1 h

**Information on toxicological effects**

**Symptoms**

Specific test data for the substance or mixture is not available.



**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Specific test data for the substance or mixture is not available.
<b>Eye damage/irritation</b>	Specific test data for the substance or mixture is not available.
<b>Irritation</b>	Specific test data for the substance or mixture is not available.
<b>Corrosivity</b>	Specific test data for the substance or mixture is not available.
<b>Sensitization</b>	Specific test data for the substance or mixture is not available. May cause an allergic skin reaction. (based on components).
<b>Mutagenic Effects</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenic effects</b>	Specific test data for the substance or mixture is not available.
<b>Reproductive Effects</b>	Specific test data for the substance or mixture is not available.
<b>STOT - single exposure</b>	Specific test data for the substance or mixture is not available.
<b>STOT - repeated exposure</b>	Specific test data for the substance or mixture is not available. Causes damage to organs through prolonged or repeated exposure. (based on components).
<b>Chronic Toxicity</b>	Specific test data for the substance or mixture is not available.
<b>Aspiration hazard</b>	Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Ethyl benzene (constituent) 100-41-4	A3
Naphthalene (constituent) 91-20-3	A3

Component	IARC
Ethyl benzene (constituent) 100-41-4	Group 2B
Naphthalene (constituent) 91-20-3	Group 2B
Cobalt Compounds	Group 2B

Component	NTP
Naphthalene (constituent) 91-20-3	Reasonably Anticipated

Component	OSHA
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X
Cobalt Compounds	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document mg/kg

<b>ATEmix (dermal)</b>	86,669.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	118.20 mg/l
<b>ATEmix (inhalation-vapor)</b>	867.00 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available.

0.23 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
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2-Butanone, oxime 96-29-7	72h EC50 <i>Desmodesmus subspicatus</i> : = 83 mg/L
Ethyl benzene (constituent) 100-41-4	96h EC50 <i>Pseudokirchneriella subcapitata</i> : > 438 mg/L 96h EC50 <i>Pseudokirchneriella subcapitata</i> : 1.7 - 7.6 mg/L static 72h EC50 <i>Pseudokirchneriella subcapitata</i> : = 4.6 mg/L 72h EC50 <i>Pseudokirchneriella subcapitata</i> : 2.6 - 11.3 mg/L static

Component	Fish
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	96h LC50 <i>Pimephales promelas</i> : = 19 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.34 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 1740 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : = 45 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 41 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	96h LC50 <i>Oncorhynchus mykiss</i> : 2.661 - 4.093 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 7.711 - 9.591 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 13.1 - 16.5 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : 30.26 - 40.75 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 13.5 - 17.3 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 19 mg/L 96h LC50 <i>Cyprinus carpio</i> : = 780 mg/L (semi-static) 96h LC50 <i>Cyprinus carpio</i> : > 780 mg/L 96h LC50 <i>Pimephales promelas</i> : = 13.4 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : 23.53 - 29.97 mg/L (static)
2-Butanone, oxime 96-29-7	96h LC50 <i>Pimephales promelas</i> : 777 - 914 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 760 mg/L (static)
Ethyl benzene (constituent) 100-41-4	96h LC50 <i>Pimephales promelas</i> : 7.55 - 11 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 9.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 11.0 - 18.0 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : 9.1 - 15.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 4.2 mg/L (semi-static) 96h LC50 <i>Lepomis macrochirus</i> : = 32 mg/L (static)
Naphthalene (constituent) 91-20-3	96h LC50 <i>Pimephales promelas</i> : 5.74 - 6.44 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 1.99 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 31.0265 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 1.6 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : 0.91 - 2.82 mg/L (static)

Component	Crustacea
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	48h EC50 <i>Daphnia magna</i> : = 0.95 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	48h EC50 water flea: = 3.82 mg/L 48h LC50 <i>Gammarus lacustris</i> : = 0.6 mg/L
2-Butanone, oxime 96-29-7	48h EC50 <i>Daphnia magna</i> : = 750 mg/L
Ethyl benzene (constituent) 100-41-4	48h EC50 <i>Daphnia magna</i> : 1.8 - 2.4 mg/L
Naphthalene (constituent) 91-20-3	48h EC50 <i>Daphnia magna</i> : 1.09 - 3.4 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 1.96 mg/L Flow through 48h LC50 <i>Daphnia magna</i> : = 2.16 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

No information available

Component	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.9 - 6.1
Xylenes (o-, m-, p- isomers) 1330-20-7	2.77 - 3.15
2-Butanone, oxime 96-29-7	0.65
Ethyl benzene (constituent) 100-41-4	3.2
Naphthalene (constituent) 91-20-3	3.6

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**ICAO / IATA / IMDG / IMO**

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**15. REGULATORY INFORMATION****International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Barium sulfate	7727-43-7	10 - 30	1.0
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	1.0
Ethyl benzene (constituent)	100-41-4	< 0.5	0.1
Naphthalene (constituent)	91-20-3	< 0.5	0.1

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

Component	CAS-No	Weight %
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Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5
Ethyl benzene (constituent)	100-41-4	< 0.5
Naphthalene (constituent)	91-20-3	< 0.5
Cobalt Compounds	Trade Secret	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X

Component	Minnesota Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
2-Butanone, oxime 96-29-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X

Component	New Jersey Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X
Cobalt Compounds	X

Component	Pennsylvania Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X
Cobalt Compounds	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other

## reproductive harm

Component	California Prop. 65
Ethyl benzene (constituent)	Carcinogen
Naphthalene (constituent)	Carcinogen

## Canada

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent 8052-41-3	Part 5, Other Groups and Mixtures
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5, Other Groups and Mixtures; Part 4 Substance
Xylenes (o-, m-, p- isomers) 1330-20-7	Part 5, Isomer Groups; Part 4 Substance
Ethyl benzene (constituent) 100-41-4	Part 1, Group A Substance; Part 4 Substance
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance; Part 4 Substance
Cobalt Compounds	Part 1, Group B Substance

## Pursuant to NOM-018-STPS-2015

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

## 16. OTHER INFORMATION

HMIS:	Health	Flammability	Reactivity	Personal Protection
	1 *	2	0	X

## Key or legend to abbreviations and acronyms used in the safety data sheet

## Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

## ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen

## IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans

## NTP: (National Toxicity Program)

Known - Known Carcinogen  
Reasonably Anticipated to be a Human Carcinogen

## OSHA: (Occupational Safety &amp; Health Administration)

X - Present

Revision Date

Aug-16-2018

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Published Date  
Aug-16-2018

Revision Date  
Aug-16-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code **59LF102**  
Product name **Fire Red**  
Product category **59000 Series SV Enamel Screen Ink**

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Skin sensitization	Category 1A - (H317)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Aspiration toxicity	Category 1 - (H304)
Chronic aquatic toxicity	Category 3 - (H412)
Flammable liquids	Category 3 - (H226)

**Label elements**



Signal Word  
Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
H317 - May cause an allergic skin reaction  
H372 - Causes damage to organs through prolonged or repeated exposure  
H412 - Harmful to aquatic life with long lasting effects

H226 - Flammable liquid and vapor

#### Precautionary Statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P314 - Get medical advice/ attention if you feel unwell  
 P273 - Avoid release to the environment  
 P331 - Do NOT induce vomiting  
 P233 - Keep container tightly closed  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P403 + P235 - Store in a well-ventilated place. Keep cool  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

#### Hazards not otherwise classified (HNOC)

Causes mild skin irritation. Harmful to aquatic life.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Mixture

Component	CAS-No	Weight %	Trade Secret	Note
Stoddard solvent	8052-41-3	10 - 30	*	
Barium sulfate	7727-43-7	10 - 30	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	1 - 5	*	
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	*	
2-Butanone, oxime	96-29-7	< 0.5	*	
Naphthalene (constituent)	91-20-3	< 0.5	*	1
Ethyl benzene (constituent)	100-41-4	< 0.5	*	1
Cobalt Compounds	Trade Secret	< 0.5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note 1. Type of chemical: Constituent

### 4. FIRST AID MEASURES

#### Description of first aid measures

##### General Advice

Show this safety data sheet to the doctor in attendance.

##### Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

##### Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

##### Inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

##### Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

#### Most important symptoms and effects, both acute and delayed

None under normal use conditions.

#### Indication of any immediate medical attention and special treatment needed

##### Notes to Physician

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### Suitable Extinguishing Media



Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable Extinguishing Media

No information available.

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### Personal Precautions

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

#### Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Handling

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

### Conditions for safe storage, including any incompatibilities

#### Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

#### Incompatible Products

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure limits

Component	ACGIH TLV
Stoddard solvent 8052-41-3	TWA: 100 ppm
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm



Component	OSHA PEL
Stoddard solvent 8052-41-3	TWA: 500 ppm TWA: 2900 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>

Component	OSHA PEL (vacated)
Stoddard solvent 8052-41-3	TWA: 100 ppm TWA: 525 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>

Component	Ontario TWA EV
Stoddard solvent 8052-41-3	TWA: 525 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm

Component	Mexico OEL (TWA)
Stoddard solvent 8052-41-3	TWAVLE-PPT: 100 ppm TWAVLE-PPT: 523 mg/m <sup>3</sup> STEL/PPT-CT: 200 ppm STEL/PPT-CT: 1050 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWAVLE-PPT: 100 ppm TWAVLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 150 ppm STEL/PPT-CT: 655 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWAVLE-PPT: 10 ppm TWAVLE-PPT: 50 mg/m <sup>3</sup> STEL/PPT-CT: 15 ppm STEL/PPT-CT: 75 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWAVLE-PPT: 100 ppm TWAVLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 125 ppm STEL/PPT-CT: 545 mg/m <sup>3</sup>

### Appropriate engineering controls

#### Engineering Measures

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	Wear safety glasses with side shields (or goggles), if splashes are likely to occur. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Respiratory Protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

Physical State	Liquid	<b>Appearance</b>	Colored Liquid
Odor	Characteristic	<b>Odor Threshold</b>	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	46 °C / 115 °F	Setaflash closed cup	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1.1		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
<b>Explosive Properties</b>	No data available		
<b>Oxidizing Properties</b>	No data available		

**Other Information**

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	9.2

<b>VOC by weight % (less water)</b>	<b>VOC by volume % (less water)</b>	<b>VOC lbs/gal (less water)</b>	<b>VOC grams/liter (less water)</b>
33.43	No information available	3.07	368.4

**10. STABILITY AND REACTIVITY****Reactivity**

No information available.

**Chemical stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible materials**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Inhalation**  
**Eye Contact**  
**Skin Contact**  
**Ingestion**

Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.

Component	Oral LD50
Barium sulfate 7727-43-7	= 307000 mg/kg ( Rat )
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg ( Rat )
Xylenes (o-, m-, p- isomers) 1330-20-7	= 3500 mg/kg ( Rat )
2-Butanone, oxime 96-29-7	= 930 mg/kg ( Rat )
Naphthalene (constituent) 91-20-3	= 1110 mg/kg ( Rat )
Ethyl benzene (constituent) 100-41-4	= 3500 mg/kg ( Rat )

Component	Dermal LD50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2 mL/kg ( Rabbit )
Xylenes (o-, m-, p- isomers) 1330-20-7	> 4350 mg/kg ( Rabbit )
2-Butanone, oxime 96-29-7	1000 - 1800 mg/kg ( Rabbit )
Naphthalene (constituent) 91-20-3	= 1120 mg/kg ( Rabbit )
Ethyl benzene (constituent) 100-41-4	= 15400 mg/kg ( Rabbit )
Cobalt Compounds	> 5000 mg/kg ( Rabbit )

Component	Inhalation LC50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
Xylenes (o-, m-, p- isomers) 1330-20-7	= 29.08 mg/L ( Rat ) 4 h
2-Butanone, oxime 96-29-7	> 4800 mg/m <sup>3</sup> ( Rat ) 4 h
Naphthalene (constituent) 91-20-3	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
Ethyl benzene (constituent) 100-41-4	= 17.4 mg/L ( Rat ) 4 h
Cobalt Compounds	> 10 mg/L ( Rat ) 1 h

**Information on toxicological effects**

**Symptoms** Specific test data for the substance or mixture is not available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Specific test data for the substance or mixture is not available.  
**Eye damage/irritation** Specific test data for the substance or mixture is not available.  
**Irritation** Specific test data for the substance or mixture is not available.  
**Corrosivity** Specific test data for the substance or mixture is not available.  
**Sensitization** Specific test data for the substance or mixture is not available. May cause an allergic skin reaction. (based on components).  
**Mutagenic Effects** Specific test data for the substance or mixture is not available.  
**Carcinogenic effects** Specific test data for the substance or mixture is not available.  
**Reproductive Effects** Specific test data for the substance or mixture is not available.  
**STOT - single exposure** Specific test data for the substance or mixture is not available.  
**STOT - repeated exposure** Specific test data for the substance or mixture is not available. Causes damage to organs through prolonged or repeated exposure. (based on components).  
**Chronic Toxicity** Specific test data for the substance or mixture is not available.  
**Aspiration hazard** Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Naphthalene (constituent) 91-20-3	A3
Ethyl benzene (constituent) 100-41-4	A3

Component	IARC
Naphthalene (constituent) 91-20-3	Group 2B
Ethyl benzene (constituent) 100-41-4	Group 2B
Cobalt Compounds	Group 2B

Component	NTP
Naphthalene (constituent) 91-20-3	Reasonably Anticipated

Component	OSHA
Naphthalene (constituent) 91-20-3	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document mg/kg

ATEmix (dermal) 79,262.00 mg/kg mg/l  
 ATEmix (inhalation-dust/mist) 108.10 mg/l  
 ATEmix (inhalation-vapor) 793.00 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available. Harmful to aquatic life with long lasting effects. (based on components).

0.23 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
2-Butanone, oxime 96-29-7	72h EC50 <i>Desmodesmus subspicatus</i> : = 83 mg/L
Ethyl benzene (constituent) 100-41-4	96h EC50 <i>Pseudokirchneriella subcapitata</i> : > 438 mg/L 96h EC50 <i>Pseudokirchneriella subcapitata</i> : 1.7 - 7.6 mg/L static 72h EC50 <i>Pseudokirchneriella subcapitata</i> : = 4.6 mg/L 72h EC50 <i>Pseudokirchneriella subcapitata</i> : 2.6 - 11.3 mg/L static

Component	Fish
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	96h LC50 <i>Pimephales promelas</i> : = 19 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.34 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 1740 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : = 45 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 41 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	96h LC50 <i>Oncorhynchus mykiss</i> : 2.661 - 4.093 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 7.711 - 9.591 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 13.1 - 16.5 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : 30.26 - 40.75 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 13.5 - 17.3 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 19 mg/L 96h LC50 <i>Cyprinus carpio</i> : = 780 mg/L (semi-static) 96h LC50 <i>Cyprinus carpio</i> : > 780 mg/L 96h LC50 <i>Pimephales promelas</i> : = 13.4 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : 23.53 - 29.97 mg/L (static)
2-Butanone, oxime 96-29-7	96h LC50 <i>Pimephales promelas</i> : 777 - 914 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 760 mg/L (static)
Naphthalene (constituent) 91-20-3	96h LC50 <i>Pimephales promelas</i> : 5.74 - 6.44 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 1.99 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 31.0265 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 1.6 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : 0.91 - 2.82 mg/L (static)
Ethyl benzene (constituent) 100-41-4	96h LC50 <i>Pimephales promelas</i> : 7.55 - 11 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 9.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 11.0 - 18.0 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : 9.1 - 15.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 4.2 mg/L (semi-static) 96h LC50 <i>Lepomis macrochirus</i> : = 32 mg/L (static)

Component	Crustacea
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	48h EC50 <i>Daphnia magna</i> : = 0.95 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	48h EC50 water flea: = 3.82 mg/L 48h LC50 <i>Gammarus lacustris</i> : = 0.6 mg/L
2-Butanone, oxime 96-29-7	48h EC50 <i>Daphnia magna</i> : = 750 mg/L
Naphthalene (constituent) 91-20-3	48h EC50 <i>Daphnia magna</i> : 1.09 - 3.4 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 1.96 mg/L Flow through 48h LC50 <i>Daphnia magna</i> : = 2.16 mg/L
Ethyl benzene (constituent) 100-41-4	48h EC50 <i>Daphnia magna</i> : 1.8 - 2.4 mg/L

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available

Component	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.9 - 6.1
Xylenes (o-, m-, p- isomers) 1330-20-7	2.77 - 3.15
2-Butanone, oxime 96-29-7	0.65
Naphthalene (constituent)	3.6

91-20-3	
Ethyl benzene (constituent)	3.2
100-41-4	

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**ICAO / IATA / IMDG / IMO**

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**15. REGULATORY INFORMATION****International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Barium sulfate	7727-43-7	10 - 30	1.0
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	1.0
Naphthalene (constituent)	91-20-3	< 0.5	0.1
Ethyl benzene (constituent)	100-41-4	< 0.5	0.1

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5
Naphthalene (constituent)	91-20-3	< 0.5
Ethyl benzene (constituent)	100-41-4	< 0.5
Cobalt Compounds	Trade Secret	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Naphthalene (constituent) 91-20-3	X
Ethyl benzene (constituent) 100-41-4	X

Component	Minnesota Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
2-Butanone, oxime 96-29-7	X
Naphthalene (constituent) 91-20-3	X
Ethyl benzene (constituent) 100-41-4	X

Component	New Jersey Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Naphthalene (constituent) 91-20-3	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X

Component	Pennsylvania Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Naphthalene (constituent) 91-20-3	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Naphthalene (constituent)	Carcinogen
Ethyl benzene (constituent)	Carcinogen

**Canada**

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent 8052-41-3	Part 5, Other Groups and Mixtures
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5, Other Groups and Mixtures; Part 4 Substance
Xylenes (o-, m-, p- isomers) 1330-20-7	Part 5, Isomer Groups; Part 4 Substance
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance; Part 4 Substance
Ethyl benzene (constituent) 100-41-4	Part 1, Group A Substance; Part 4 Substance
Cobalt Compounds	Part 1, Group B Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

<b>HMIS:</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Personal Protection</b>
	1 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

- X - Present

Revision Date

Aug-16-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



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End of Safety Data Sheet



## SAFETY DATA SHEET

Published Date  
Aug-16-2018

Revision Date  
Aug-16-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code 59204  
Product name Bright Red  
Product category 59000 Series SV Enamel Screen Ink

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Skin sensitization	Category 1A - (H317)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Aspiration toxicity	Category 1 - (H304)
Flammable liquids	Category 3 - (H226)

**Label elements**



**Signal Word**

Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
H317 - May cause an allergic skin reaction  
H372 - Causes damage to organs through prolonged or repeated exposure  
H226 - Flammable liquid and vapor

**Precautionary Statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P314 - Get medical advice/ attention if you feel unwell  
 P331 - Do NOT induce vomiting  
 P233 - Keep container tightly closed  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P403 + P235 - Store in a well-ventilated place. Keep cool  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Hazards not otherwise classified (HNOC)**

Causes mild skin irritation. Harmful to aquatic life.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
Stoddard solvent	8052-41-3	10 - 30	*	
Calcium carbonate	1317-65-3	10 - 30	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	1 - 5	*	
Naphtha, petroleum, hydrotreated heavy	64742-48-9	1 - 5	*	
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	*	
2-Butanone, oxime	96-29-7	< 1	*	
Ethyl benzene (constituent)	100-41-4	< 0.5	*	1
Naphthalene (constituent)	91-20-3	< 0.5	*	1
Cobalt Compounds	Trade Secret	< 0.5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note: 1 Type of chemical: Constituent

### 4. FIRST AID MEASURES

**Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Foam, Carbon dioxide (CO2), Dry chemical, Water spray. Use extinguishing measures that are appropriate to local circumstances

and the surrounding environment.

#### **Unsuitable Extinguishing Media**

No information available.

#### **Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

#### **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### **Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

#### **Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

#### **Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

#### **Exposure limits**

Component	ACGIH TLV
Stoddard solvent 8052-41-3	TWA: 100 ppm
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Component	OSHA PEL
Stoddard solvent 8052-41-3	TWA: 500 ppm TWA: 2900 mg/m <sup>3</sup>

Calcium carbonate 1317-65-3	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>

Component	OSHA PEL (vacated)
Stoddard solvent 8052-41-3	TWA: 100 ppm TWA: 525 mg/m <sup>3</sup>
Calcium carbonate 1317-65-3	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>

Component	Ontario TWAEV
Stoddard solvent 8052-41-3	TWA: 525 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin

Component	Mexico OEL (TWA)
Stoddard solvent 8052-41-3	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 523 mg/m <sup>3</sup> STEL/PPT-CT: 200 ppm STEL/PPT-CT: 1050 mg/m <sup>3</sup>
Calcium carbonate 1317-65-3	TWA/VLE-PPT: 10 mg/m <sup>3</sup> STEL/PPT-CT: 20 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 150 ppm STEL/PPT-CT: 655 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 125 ppm STEL/PPT-CT: 545 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA/VLE-PPT: 10 ppm TWA/VLE-PPT: 50 mg/m <sup>3</sup> STEL/PPT-CT: 15 ppm STEL/PPT-CT: 75 mg/m <sup>3</sup>

### Appropriate engineering controls

#### Engineering Measures

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

### Individual protection measures, such as personal protective equipment

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear

	suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Respiratory Protection</b>	If exposure limits are <b>exceeded</b> or irritation is experienced, NIOSH/MSHA approved respiratory protection <b>should</b> be worn. <b>Respiratory protection</b> must be provided in accordance with current local regulations.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available

Property	Values	Remarks • Method
pH		No data available
Melting Point / Freezing Point		No data available
Boiling Point / Boiling Range	> 149 °C / 300 °F	
Flash Point	46 °C / 115 °F	Setaflash closed cup
Evaporation rate		No data available
Flammability Limit in Air		
Upper flammability limit		No data available
Lower flammability limit		No data available
Vapor Pressure		No data available
Vapor Density		No data available
Specific Gravity	1.07	
Water Solubility		No data available
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition Temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

Explosive Properties	No data available
Oxidizing Properties	No data available

### Other Information

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	8.89

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
33.73	No information available	3	359.3

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

#### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

#### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

#### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

**Inhalation**  
**Eye Contact**  
**Skin Contact**  
**Ingestion**

Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.

Component	Oral LD50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg ( Rat )
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 6000 mg/kg ( Rat )
Xylenes (o-, m-, p- isomers) 1330-20-7	= 3500 mg/kg ( Rat )
2-Butanone, oxime 96-29-7	= 930 mg/kg ( Rat )
Ethyl benzene (constituent) 100-41-4	= 3500 mg/kg ( Rat )
Naphthalene (constituent) 91-20-3	= 1110 mg/kg ( Rat )

Component	Dermal LD50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2 mL/kg ( Rabbit )
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 3160 mg/kg ( Rabbit )
Xylenes (o-, m-, p- isomers) 1330-20-7	> 4350 mg/kg ( Rabbit )
2-Butanone, oxime 96-29-7	1000 - 1800 mg/kg ( Rabbit )
Ethyl benzene (constituent) 100-41-4	= 15400 mg/kg ( Rabbit )
Naphthalene (constituent) 91-20-3	= 1120 mg/kg ( Rabbit )
Cobalt Compounds	> 5000 mg/kg ( Rabbit )

Component	Inhalation LC50
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 8500 mg/m <sup>3</sup> ( Rat ) 4 h
Xylenes (o-, m-, p- isomers) 1330-20-7	= 29.08 mg/L ( Rat ) 4 h
2-Butanone, oxime 96-29-7	> 4800 mg/m <sup>3</sup> ( Rat ) 4 h
Ethyl benzene (constituent) 100-41-4	= 17.4 mg/L ( Rat ) 4 h
Naphthalene (constituent) 91-20-3	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
Cobalt Compounds	> 10 mg/L ( Rat ) 1 h



**Information on toxicological effects**

**Symptoms** Specific test data for the substance or mixture is not available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Specific test data for the substance or mixture is not available.  
**Eye damage/irritation** Specific test data for the substance or mixture is not available.  
**Irritation** Specific test data for the substance or mixture is not available.  
**Corrosivity** Specific test data for the substance or mixture is not available.  
**Sensitization** Specific test data for the substance or mixture is not available. May cause an allergic skin reaction. (based on components).  
**Mutagenic Effects** Specific test data for the substance or mixture is not available.  
**Carcinogenic effects** Specific test data for the substance or mixture is not available.  
**Reproductive Effects** Specific test data for the substance or mixture is not available.  
**STOT - single exposure** Specific test data for the substance or mixture is not available.  
**STOT - repeated exposure** Specific test data for the substance or mixture is not available. Causes damage to organs through prolonged or repeated exposure. (based on components).  
**Chronic Toxicity** Specific test data for the substance or mixture is not available.  
**Aspiration hazard** Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Ethyl benzene (constituent) 100-41-4	A3
Naphthalene (constituent) 91-20-3	A3

Component	IARC
Ethyl benzene (constituent) 100-41-4	Group 2B
Naphthalene (constituent) 91-20-3	Group 2B
Cobalt Compounds	Group 2B

Component	NTP
Naphthalene (constituent) 91-20-3	Reasonably Anticipated

Component	OSHA
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X
Cobalt Compounds	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document mg/kg

ATEmix (dermal) 79,988.00 mg/kg mg/l  
 ATEmix (inhalation-dust/mist) 109.10 mg/l  
 ATEmix (inhalation-vapor) 800.00 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available.

0.24 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
2-Butanone, oxime 96-29-7	72h EC50 <i>Desmodesmus subspicatus</i> : = 83 mg/L
Ethyl benzene (constituent) 100-41-4	96h EC50 <i>Pseudokirchneriella subcapitata</i> : > 438 mg/L 96h EC50 <i>Pseudokirchneriella subcapitata</i> : 1.7 - 7.6 mg/L static 72h EC50 <i>Pseudokirchneriella subcapitata</i> : = 4.6 mg/L 72h EC50 <i>Pseudokirchneriella subcapitata</i> : 2.6 - 11.3 mg/L static

Component	Fish
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	96h LC50 <i>Pimephales promelas</i> : = 19 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.34 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 1740 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : = 45 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 41 mg/L
Naphtha, petroleum, hydrotreated heavy 64742-48-9	96h LC50 <i>Pimephales promelas</i> : = 2200 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	96h LC50 <i>Oncorhynchus mykiss</i> : 2.661 - 4.093 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 7.711 - 9.591 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 13.1 - 16.5 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : 30.26 - 40.75 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 13.5 - 17.3 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 19 mg/L 96h LC50 <i>Cyprinus carpio</i> : = 780 mg/L (semi-static) 96h LC50 <i>Cyprinus carpio</i> : > 780 mg/L 96h LC50 <i>Pimephales promelas</i> : = 13.4 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : 23.53 - 29.97 mg/L (static)
2-Butanone, oxime 96-29-7	96h LC50 <i>Pimephales promelas</i> : 777 - 914 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 760 mg/L (static)
Ethyl benzene (constituent) 100-41-4	96h LC50 <i>Pimephales promelas</i> : 7.55 - 11 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 9.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 11.0 - 18.0 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : 9.1 - 15.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 4.2 mg/L (semi-static) 96h LC50 <i>Lepomis macrochirus</i> : = 32 mg/L (static)
Naphthalene (constituent) 91-20-3	96h LC50 <i>Pimephales promelas</i> : 5.74 - 6.44 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 1.99 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 31.0265 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 1.6 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : 0.91 - 2.82 mg/L (static)

Component	Crustacea
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	48h EC50 <i>Daphnia magna</i> : = 0.95 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	48h EC50 water flea: = 3.82 mg/L 48h LC50 <i>Gammarus lacustris</i> : = 0.6 mg/L
2-Butanone, oxime 96-29-7	48h EC50 <i>Daphnia magna</i> : = 750 mg/L
Ethyl benzene (constituent) 100-41-4	48h EC50 <i>Daphnia magna</i> : 1.8 - 2.4 mg/L
Naphthalene (constituent) 91-20-3	48h EC50 <i>Daphnia magna</i> : 1.09 - 3.4 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 1.96 mg/L Flow through 48h LC50 <i>Daphnia magna</i> : = 2.16 mg/L

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available

Component	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.9 - 6.1
Xylenes (o-, m-, p- isomers) 1330-20-7	2.77 - 3.15
2-Butanone, oxime 96-29-7	0.65

Ethyl benzene (constituent) 100-41-4	3.2
Naphthalene (constituent) 91-20-3	3.6

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**ICAO / IATA / IMDG / IMO**

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**15. REGULATORY INFORMATION****International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	1.0
Ethyl benzene (constituent)	100-41-4	< 0.5	0.1
Naphthalene (constituent)	91-20-3	< 0.5	0.1

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

Component	CAS-No	Weight %
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5
Ethyl benzene (constituent)	100-41-4	< 0.5
Naphthalene (constituent)	91-20-3	< 0.5
Cobalt Compounds	Trade Secret	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
Stoddard solvent 8052-41-3	X
Calcium carbonate 1317-65-3	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X

Component	Minnesota Right To Know
Stoddard solvent 8052-41-3	X
Calcium carbonate 1317-65-3	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
2-Butanone, oxime 96-29-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X

Component	New Jersey Right To Know
Stoddard solvent 8052-41-3	X
Calcium carbonate 1317-65-3	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X
Cobalt Compounds	X

Component	Pennsylvania Right To Know
Stoddard solvent 8052-41-3	X
Calcium carbonate 1317-65-3	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Naphthalene (constituent) 91-20-3	X
Cobalt Compounds	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Ethyl benzene (constituent)	Carcinogen
Naphthalene (constituent)	Carcinogen

**Canada**

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent 8052-41-3	Part 5, Other Groups and Mixtures
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5, Other Groups and Mixtures; Part 4 Substance
Naphtha, petroleum, hydrotreated heavy 64742-48-9	Part 5, Other Groups and Mixtures
Xylenes (o-, m-, p- isomers) 1330-20-7	Part 5, Isomer Groups; Part 4 Substance
Ethyl benzene (constituent) 100-41-4	Part 1, Group A Substance; Part 4 Substance
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance; Part 4 Substance
Cobalt Compounds	Part 1, Group B Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

HMIS:	Health	Flammability	Reactivity	Personal Protection
	1 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

Revision Date

Aug-16-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless

specified in the text.

End of Safety Data Sheet



## SAFETY DATA SHEET

Published Date  
Aug-16-2018

Revision Date  
Aug-16-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code 59111  
Product name Black  
Product category 59000 Series SV Enamel Screen Ink

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Skin sensitization	Category 1A - (H317)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)
Aspiration toxicity	Category 1 - (H304)
Flammable liquids	Category 3 - (H226)

**Label elements**



Signal Word  
Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
H317 - May cause an allergic skin reaction  
H372 - Causes damage to organs through prolonged or repeated exposure  
H226 - Flammable liquid and vapor



**Precautionary Statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P314 - Get medical advice/ attention if you feel unwell  
 P331 - Do NOT induce vomiting  
 P233 - Keep container tightly closed  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P403 + P235 - Store in a well-ventilated place. Keep cool  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Hazards not otherwise classified (HNOC)**

Causes mild skin irritation. Harmful to aquatic life.

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
--

**Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
Stoddard solvent	8052-41-3	10 - 30	*	
Barium sulfate	7727-43-7	10 - 30	*	
Carbon black	1333-86-4	1 - 5	*	
Naphtha, petroleum, hydrotreated heavy	64742-48-9	1 - 5	*	
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	*	
2-Butanone, oxime	96-29-7	< 1	*	
Calcium 2-ethylhexanoate	136-51-6	< 0.5	*	
Ethyl benzene (constituent)	100-41-4	< 0.5	*	1
Cobalt Compounds	Trade Secret	< 0.5	*	
Hexanoic acid, 2-ethyl, zinc salt	136-53-8	< 0.5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note 1. Type of chemical: Constituent

<b>4. FIRST AID MEASURES</b>
------------------------------

**Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

<b>5. FIRE-FIGHTING MEASURES</b>
----------------------------------

**Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### **Unsuitable Extinguishing Media**

No information available.

#### **Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

#### **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

### **6. ACCIDENTAL RELEASE MEASURES**

#### **Personal precautions, protective equipment and emergency procedures**

##### **Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

##### **Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

##### **Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

### **7. HANDLING AND STORAGE**

#### **Precautions for safe handling**

##### **Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

#### **Conditions for safe storage, including any incompatibilities**

##### **Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

##### **Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Control parameters**

##### **Exposure limits**

Component	ACGIH TLV
Stoddard solvent 8052-41-3	TWA: 100 ppm
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable particulate matter, particulate matter containing no asbestos and <1% crystalline silica
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable particulate matter
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm

Component	OSHA PEL
Stoddard solvent 8052-41-3	TWA: 500 ppm TWA: 2900 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Carbon black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>

Component	OSHA PEL (vacated)
Stoddard solvent 8052-41-3	TWA: 100 ppm TWA: 525 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction
Carbon black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 150 ppm STEL: 655 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA: 100 ppm TWA: 435 mg/m <sup>3</sup> STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>

Component	Ontario TWAEV
Stoddard solvent 8052-41-3	TWA: 525 mg/m <sup>3</sup>
Barium sulfate 7727-43-7	TWA: 5 mg/m <sup>3</sup> inhalable
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA: 100 ppm STEL: 150 ppm
Ethyl benzene (constituent) 100-41-4	TWA: 20 ppm

Component	Mexico OEL (TWA)
Stoddard solvent 8052-41-3	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 523 mg/m <sup>3</sup> STEL/PPT-CT: 200 ppm STEL/PPT-CT: 1050 mg/m <sup>3</sup>
Carbon black 1333-86-4	TWA/VLE-PPT: 3.5 mg/m <sup>3</sup> STEL/PPT-CT: 7 mg/m <sup>3</sup>
Xylenes (o-, m-, p- isomers) 1330-20-7	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 150 ppm STEL/PPT-CT: 655 mg/m <sup>3</sup>
Ethyl benzene (constituent) 100-41-4	TWA/VLE-PPT: 100 ppm TWA/VLE-PPT: 435 mg/m <sup>3</sup> STEL/PPT-CT: 125 ppm STEL/PPT-CT: 545 mg/m <sup>3</sup>

### Appropriate engineering controls

#### Engineering Measures

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

### Individual protection measures, such as personal protective equipment

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear suitable face shield. Ensure that eyewash stations and safety showers are close to the

workstation location.

**Skin Protection**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	46 °C / 115 °F	Setaflash closed cup	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1.17		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties	No data available		
Oxidizing Properties	No data available		

**Other Information**

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	9.75

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
31.32	39.9	3.06	366.37

## 10. STABILITY AND REACTIVITY

**Reactivity**

No information available.

**Chemical stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible materials**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

<b>11. TOXICOLOGICAL INFORMATION</b>
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**Information on likely routes of exposure****Inhalation**

Specific test data for the substance or mixture is not available.

**Eye Contact**

Specific test data for the substance or mixture is not available.

**Skin Contact**

Specific test data for the substance or mixture is not available.

**Ingestion**

Specific test data for the substance or mixture is not available.

Component	Oral LD50
Barium sulfate 7727-43-7	= 307000 mg/kg ( Rat )
Carbon black 1333-86-4	> 15400 mg/kg ( Rat )
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 6000 mg/kg ( Rat )
Xylenes (o-, m-, p- isomers) 1330-20-7	= 3500 mg/kg ( Rat )
2-Butanone, oxime 96-29-7	= 930 mg/kg ( Rat )
Calcium 2-ethylhexanoate 136-51-6	> 5000 mg/kg ( Rat )
Ethyl benzene (constituent) 100-41-4	= 3500 mg/kg ( Rat )
Hexanoic acid, 2-ethyl, zinc salt 136-53-8	= 3550 mg/kg ( Rat ) = 3700 mg/kg ( Rat )

Component	Dermal LD50
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 3160 mg/kg ( Rabbit )
Xylenes (o-, m-, p- isomers) 1330-20-7	> 4350 mg/kg ( Rabbit )
2-Butanone, oxime 96-29-7	1000 - 1800 mg/kg ( Rabbit )
Ethyl benzene (constituent) 100-41-4	= 15400 mg/kg ( Rabbit )
Cobalt Compounds	> 5000 mg/kg ( Rabbit )
Hexanoic acid, 2-ethyl, zinc salt 136-53-8	> 5000 mg/kg ( Rabbit )

Component	Inhalation LC50
Naphtha, petroleum, hydrotreated heavy 64742-48-9	> 8500 mg/m <sup>3</sup> ( Rat ) 4 h
Xylenes (o-, m-, p- isomers) 1330-20-7	= 29.08 mg/L ( Rat ) 4 h
2-Butanone, oxime 96-29-7	> 4800 mg/m <sup>3</sup> ( Rat ) 4 h
Calcium 2-ethylhexanoate 136-51-6	> 4.8 mg/L ( Rat ) 1 h
Ethyl benzene (constituent) 100-41-4	= 17.4 mg/L ( Rat ) 4 h
Cobalt Compounds	> 10 mg/L ( Rat ) 1 h
Hexanoic acid, 2-ethyl, zinc salt 136-53-8	> 23.2 mg/L ( Rat ) 1 h

**Information on toxicological effects**

**Symptoms** Specific test data for the substance or mixture is not available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Specific test data for the substance or mixture is not available.  
**Eye damage/irritation** Specific test data for the substance or mixture is not available.  
**Irritation** Specific test data for the substance or mixture is not available.  
**Corrosivity** Specific test data for the substance or mixture is not available.  
**Sensitization** Specific test data for the substance or mixture is not available. May cause an allergic skin reaction. (based on components).  
**Mutagenic Effects** Specific test data for the substance or mixture is not available.  
**Carcinogenic effects** Specific test data for the substance or mixture is not available.  
**Reproductive Effects** Specific test data for the substance or mixture is not available.  
**STOT - single exposure** Specific test data for the substance or mixture is not available.  
**STOT - repeated exposure** Specific test data for the substance or mixture is not available. Causes damage to organs through prolonged or repeated exposure. (based on components).  
**Chronic Toxicity** Specific test data for the substance or mixture is not available.  
**Aspiration hazard** Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Carbon black 1333-86-4	A3
Ethyl benzene (constituent) 100-41-4	A3

Component	IARC
Carbon black 1333-86-4	Group 2B
Ethyl benzene (constituent) 100-41-4	Group 2B
Cobalt Compounds	Group 2B

Component	OSHA
Carbon black 1333-86-4	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document mg/kg

**ATEmix (dermal)** 83,829.00 mg/kg mg/l  
**ATEmix (inhalation-dust/mist)** 114.30 mg/l  
**ATEmix (inhalation-vapor)** 838.00 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available.

0.23 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
2-Butanone, oxime 96-29-7	72h EC50 <i>Desmodesmus subspicatus</i> : = 83 mg/L
Ethyl benzene (constituent) 100-41-4	96h EC50 <i>Pseudokirchneriella subcapitata</i> : > 438 mg/L 96h EC50 <i>Pseudokirchneriella subcapitata</i> : 1.7 - 7.6 mg/L static 72h EC50 <i>Pseudokirchneriella subcapitata</i> : = 4.6 mg/L 72h EC50 <i>Pseudokirchneriella subcapitata</i> : 2.6 - 11.3 mg/L static

Component	Fish
Naphtha, petroleum, hydrotreated heavy 64742-48-9	96h LC50 <i>Pimephales promelas</i> : = 2200 mg/L
Xylenes (o-, m-, p- isomers) 1330-20-7	96h LC50 <i>Oncorhynchus mykiss</i> : 2.661 - 4.093 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 7.711 - 9.591 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : 13.1 - 16.5 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : 30.26 - 40.75 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 13.5 - 17.3 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 19 mg/L 96h LC50 <i>Cyprinus carpio</i> : = 780 mg/L (semi-static) 96h LC50 <i>Cyprinus carpio</i> : > 780 mg/L 96h LC50 <i>Pimephales promelas</i> : = 13.4 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : 23.53 - 29.97 mg/L (static)
2-Butanone, oxime 96-29-7	96h LC50 <i>Pimephales promelas</i> : 777 - 914 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 760 mg/L (static)
Ethyl benzene (constituent) 100-41-4	96h LC50 <i>Pimephales promelas</i> : 7.55 - 11 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 9.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : 11.0 - 18.0 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : 9.1 - 15.6 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 4.2 mg/L (semi-static) 96h LC50 <i>Lepomis macrochirus</i> : = 32 mg/L (static)

Component	Crustacea
Xylenes (o-, m-, p- isomers) 1330-20-7	48h EC50 water flea: = 3.82 mg/L 48h LC50 <i>Gammarus lacustris</i> : = 0.6 mg/L
2-Butanone, oxime 96-29-7	48h EC50 <i>Daphnia magna</i> : = 750 mg/L
Ethyl benzene (constituent) 100-41-4	48h EC50 <i>Daphnia magna</i> : 1.8 - 2.4 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

No information available

Component	Partition coefficient
Xylenes (o-, m-, p- isomers) 1330-20-7	2.77 - 3.15
2-Butanone, oxime 96-29-7	0.65
Ethyl benzene (constituent) 100-41-4	3.2

**Other adverse effects**

No information available

<b>13. DISPOSAL CONSIDERATIONS</b>
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**Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

<b>14. TRANSPORT INFORMATION</b>
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**Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**ICAO / IATA / IMDG / IMO**

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Barium sulfate	7727-43-7	10 - 30	1.0
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5	1.0
Ethyl benzene (constituent)	100-41-4	< 0.5	0.1

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
Xylenes (o-, m-, p- isomers)	1330-20-7	1 - 5
Ethyl benzene (constituent)	100-41-4	< 0.5
Cobalt Compounds	Trade Secret	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Carbon black 1333-86-4	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X

Ethyl benzene (constituent) 100-41-4	X
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Component	Minnesota Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Carbon black 1333-86-4	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
2-Butanone, oxime 96-29-7	X
Ethyl benzene (constituent) 100-41-4	X

Component	New Jersey Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Carbon black 1333-86-4	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X
Hexanoic acid, 2-ethyl, zinc salt 136-53-8	X

Component	Pennsylvania Right To Know
Stoddard solvent 8052-41-3	X
Barium sulfate 7727-43-7	X
Carbon black 1333-86-4	X
Xylenes (o-, m-, p- isomers) 1330-20-7	X
Ethyl benzene (constituent) 100-41-4	X
Cobalt Compounds	X
Hexanoic acid, 2-ethyl, zinc salt 136-53-8	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Carbon black	Carcinogen
Ethyl benzene (constituent)	Carcinogen

- This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product

**Canada**

Component	NPRI - National Pollutant Release Inventory
Stoddard solvent 8052-41-3	Part 5, Other Groups and Mixtures
Naphtha, petroleum, hydrotreated heavy 64742-48-9	Part 5, Other Groups and Mixtures

Xylenes (o-, m-, p- isomers) 1330-20-7	Part 5, Isomer Groups, Part 4 Substance
Ethyl benzene (constituent) 100-41-4	Part 1, Group A Substance, Part 4 Substance
Cobalt Compounds	Part 1, Group B Substance
Hexanoic acid, 2-ethyl, zinc salt 136-53-8	Part 1, Group A Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

<b>16. OTHER INFORMATION</b>
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<b>HMIS:</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Personal Protection</b>
	1 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

- X - Present

Revision Date Aug-16-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Published Date  
Aug-17-2018

Revision Date  
Aug-17-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code **9724**  
Product name **Black**  
Product category **9700 Series SV Screen Ink**

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

**Label elements**



**Signal Word**  
Warning

**Hazard Statements**

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin

H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P330 - Rinse mouth  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 - If eye irritation persists: Get medical advice/attention  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Hazards not otherwise classified (HNOC)**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
2-Butoxyethanol	111-76-2	30 - 60	*	
Carbon black	1333-86-4	5 - 10	*	
Resin	Trade Secret	1 - 5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

#### **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### **Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

#### **Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

#### **Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

#### **Exposure limits**

Component	ACGIH TLV
2-Butoxyethanol 111-76-2	TWA: 20 ppm
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable particulate matter

Component	OSHA PEL
2-Butoxyethanol 111-76-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup> Skin
Carbon black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>

Component	OSHA PEL (vacated)
2-Butoxyethanol 111-76-2	TWA: 25 ppm TWA: 120 mg/m <sup>3</sup> Skin
Carbon black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>

Component	Ontario TWAEV
2-Butoxyethanol 111-76-2	TWA: 20 ppm
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable

Component	Mexico OEL (TWA)
2-Butoxyethanol 111-76-2	TWA/VLE-PPT: 26 ppm TWA/VLE-PPT: 120 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT: 360 mg/m <sup>3</sup>
Carbon black 1333-86-4	TWA/VLE-PPT: 3.5 mg/m <sup>3</sup> STEL/PPT-CT: 7 mg/m <sup>3</sup>

### Appropriate engineering controls

#### Engineering Measures

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

### Individual protection measures, such as personal protective equipment

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

#### Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

#### General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	62 °C / 143 °F	Pensky Martens Closed Cup (PMCC)	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	



Dynamic viscosity No data available

Explosive Properties No data available

Oxidizing Properties No data available

#### Other Information

Photochemically Reactive No  
Weight Per Gallon (lbs/gal) 8.35

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
58.53	60.46	4.89	586.32

### 10. STABILITY AND REACTIVITY

#### Reactivity

No information available.

#### Chemical stability

Stable under normal conditions.

#### Possibility of Hazardous Reactions

None under normal processing.

#### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

#### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

#### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available. Harmful if inhaled. (based on components).
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available. Harmful in contact with skin. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Component	Oral LD50
2-Butoxyethanol 111-76-2	= 470 mg/kg ( Rat )
Carbon black 1333-86-4	> 15400 mg/kg ( Rat )

Component	Dermal LD50
2-Butoxyethanol 111-76-2	= 99 mg/kg ( Rabbit )

Component	Inhalation LC50
2-Butoxyethanol 111-76-2	= 450 ppm ( Rat ) 4 h = 486 ppm ( Rat ) 4 h

#### Information on toxicological effects

Symptoms Specific test data for the substance or mixture is not available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Specific test data for the substance or mixture is not available. Causes skin irritation (pain, redness and swelling). (based on components).
<b>Eye damage/irritation</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
<b>Irritation</b>	Specific test data for the substance or mixture is not available.
<b>Corrosivity</b>	Specific test data for the substance or mixture is not available.
<b>Sensitization</b>	Specific test data for the substance or mixture is not available.
<b>Mutagenic Effects</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenic effects</b>	Specific test data for the substance or mixture is not available.
<b>Reproductive Effects</b>	Specific test data for the substance or mixture is not available.
<b>STOT - single exposure</b>	Specific test data for the substance or mixture is not available.
<b>STOT - repeated exposure</b>	Specific test data for the substance or mixture is not available.
<b>Chronic Toxicity</b>	Specific test data for the substance or mixture is not available.
<b>Aspiration hazard</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
2-Butoxyethanol 111-76-2	A3
Carbon black 1333-86-4	A3

Component	IARC
Carbon black 1333-86-4	Group 2B

Component	OSHA
Carbon black 1333-86-4	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	860.00 mg/kg
ATEmix (dermal)	1,891.00 mg/kg mg/l
ATEmix (inhalation-dust/mist)	2.60 mg/l
ATEmix (inhalation-vapor)	19.00 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available.

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Fish
2-Butoxyethanol 111-76-2	96h LC50 Lepomis macrochirus = 2950 mg/L 96h LC50 Lepomis macrochirus = 1490 mg/L (static)

Component	Crustacea
2-Butoxyethanol 111-76-2	48h EC50 Daphnia magna: > 1000 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

No information available

Component	Partition coefficient
2-Butoxyethanol 111-76-2	0.81

**Other adverse effects**

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. TRANSPORT INFORMATION

**Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

Proper Shipping Name

Not regulated

Printing Ink

**ICAO / IATA / IMDG / IMO**

Proper Shipping Name

Not Regulated

Printing Ink

### 15. REGULATORY INFORMATION

**International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Butoxyethanol	111-76-2	30 - 60	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
2-Butoxyethanol	111-76-2	30 - 60
Xylenes (o-, m-, p- isomers)	1330-20-7	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
2-Butoxyethanol 111-76-2	X
Carbon black 1333-86-4	X

Component	Minnesota Right To Know
2-Butoxyethanol 111-76-2	X
Carbon black 1333-86-4	X

Component	New Jersey Right To Know
2-Butoxyethanol 111-76-2	X
Carbon black 1333-86-4	X

Component	Pennsylvania Right To Know
2-Butoxyethanol 111-76-2	X
Carbon black 1333-86-4	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Carbon black	Carcinogen

- This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product.

**Canada**

Component	NPRI - National Pollutant Release Inventory
2-Butoxyethanol 111-76-2	Part 5, Individual Substances; Part 4 Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

<b>16. OTHER INFORMATION</b>
------------------------------

<b>HMIS:</b>	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Personal Protection</b>
	2 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen

Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Revision Date**

Aug-17-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

Published Date  
Aug-27-2018

Revision Date  
Aug-27-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code **RE180**  
Product name **Thinner**  
Product category **Ink Product**

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

**Label elements**



**Signal Word**  
Warning

**Hazard Statements**

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P330 - Rinse mouth  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Hazards not otherwise classified (HNOC)**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
2-Butoxyethanol	111-76-2	60 - 100	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.



**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

**Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure limits**

Component	ACGIH TLV
2-Butoxyethanol 111-76-2	TWA: 20 ppm

Component	OSHA PEL
2-Butoxyethanol 111-76-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup> Skin

Component	OSHA PEL (vacated)
2-Butoxyethanol 111-76-2	TWA: 25 ppm TWA: 120 mg/m <sup>3</sup> Skin

Component	Ontario TWAEL
2-Butoxyethanol 111-76-2	TWA: 20 ppm

Component	Mexico OEL (TWA)
2-Butoxyethanol 111-76-2	TWA/VLE-PPT: 26 ppm TWA/VLE-PPT: 120 mg/m <sup>3</sup>

STEL/PPT-CT: 75 ppm STEL/PPT-CT: 360 mg/m <sup>3</sup>
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**Appropriate engineering controls****Engineering Measures**

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment****Eye/Face Protection**

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

**Skin Protection**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>
--

**Information on basic physical and chemical properties**

Physical State	Liquid	Appearance	Water-white
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	66 °C / 150 °F	Tag closed cup	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	0.9		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties	No data available		
Oxidizing Properties	No data available		

**Other Information**

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	7.52

VOC by weight % (less water) 100	VOC by volume % (less water) 100	VOC lbs/gal (less water) 7.52	VOC grams/liter (less water) 901.22
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## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available. Harmful if inhaled. (based on components).
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available. Harmful in contact with skin. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Component	Oral LD50
2-Butoxyethanol 111-76-2	= 470 mg/kg ( Rat )

Component	Dermal LD50
2-Butoxyethanol 111-76-2	= 99 mg/kg ( Rabbit )

Component	Inhalation LC50
2-Butoxyethanol 111-76-2	= 450 ppm ( Rat ) 4 h = 486 ppm ( Rat ) 4 h

### Information on toxicological effects

Symptoms	Specific test data for the substance or mixture is not available.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Specific test data for the substance or mixture is not available. Causes skin irritation (pain, redness and swelling). (based on components).
Eye damage/irritation	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
Irritation	Specific test data for the substance or mixture is not available.
Corrosivity	Specific test data for the substance or mixture is not available.
Sensitization	Specific test data for the substance or mixture is not available.
Mutagenic Effects	Specific test data for the substance or mixture is not available.
Carcinogenic effects	Specific test data for the substance or mixture is not available.

<b>Reproductive Effects</b>	Specific test data for the substance or mixture is not available.
<b>STOT - single exposure</b>	Specific test data for the substance or mixture is not available.
<b>STOT - repeated exposure</b>	Specific test data for the substance or mixture is not available.
<b>Chronic Toxicity</b>	Specific test data for the substance or mixture is not available.
<b>Aspiration hazard</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
2-Butoxyethanol 111-76-2	A3

#### Numerical measures of toxicity - Product Information

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	501.00 mg/kg
ATEmix (dermal)	1,101.00 mg/kg mg/l
ATEmix (inhalation-dust/mist)	1.50 mg/l
ATEmix (inhalation-vapor)	11.00 mg/l

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Specific test data for the substance or mixture is not available.

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Fish
2-Butoxyethanol 111-76-2	96h LC50 Lepomis macrochirus = 2950 mg/L 96h LC50 Lepomis macrochirus = 1490 mg/L (static)

Component	Crustacea
2-Butoxyethanol 111-76-2	48h EC50 Daphnia magna: > 1000 mg/L

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available

Component	Partition coefficient
2-Butoxyethanol 111-76-2	0.81

#### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

##### **Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

##### **Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

#### 14. TRANSPORT INFORMATION

**Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**
**Proper Shipping Name**

Not regulated

Printing Ink Related Material

**ICAO / IATA / IMDG / IMO**
**Proper Shipping Name**

Not Regulated

Printing Ink Related Material

#### 15. REGULATORY INFORMATION

**International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Butoxyethanol	111-76-2	60 - 100	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
2-Butoxyethanol	111-76-2	60 - 100
Ethylene glycol monopropyl ether	2807-30-9	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
2-Butoxyethanol 111-76-2	X

Component	Minnesota Right To Know
2-Butoxyethanol 111-76-2	X

Component	New Jersey Right To Know
2-Butoxyethanol 111-76-2	X

Component	Pennsylvania Right To Know
2-Butoxyethanol 111-76-2	X

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects

**Canada**

Component	NPRI - National Pollutant Release Inventory
2-Butoxyethanol 111-76-2	Part 5, Individual Substances; Part 4 Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

HMIS:	Health	Flammability	Reactivity	Personal Protection
	2 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

Revision Date

Aug-27-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Published Date  
Aug-17-2018

Revision Date  
Aug-17-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code **97LF20**  
Product name **Brilliant Orange**  
Product category **9700 Series SV Screen Ink**

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin Corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

**Label elements**



**Signal Word**  
Warning

**Hazard Statements**

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin



H315 - Causes skin irritation  
 H319 - Causes serious eye irritation  
 H332 - Harmful if inhaled

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P330 - Rinse mouth  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 - If eye irritation persists: Get medical advice/attention  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Hazards not otherwise classified (HNOC)**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
2-Butoxyethanol	111-76-2	30 - 60	*	
Resin	Trade Secret	5 - 10	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

**Inhalation**

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

**Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure limits**

Component	ACGIH TLV
2-Butoxyethanol 111-76-2	TWA: 20 ppm

Component	OSHA PEL
2-Butoxyethanol 111-76-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup> Skin

Component	OSHA PEL (vacated)
2-Butoxyethanol 111-76-2	TWA: 25 ppm TWA: 120 mg/m <sup>3</sup> Skin

Component	Ontario TWAEV
2-Butoxyethanol 111-76-2	TWA: 20 ppm

Component	Mexico OEL (TWA)
2-Butoxyethanol	TWA/VLE-PPT: 26 ppm

111-76-2	TWAVE/PPT: 120 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT: 360 mg/m <sup>3</sup>
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**Appropriate engineering controls****Engineering Measures**

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment****Eye/Face Protection**

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

**Skin Protection**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	62 °C / 143 °F	Pensky Martens Closed Cup (PMCC)	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1.01		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties	No data available		
Oxidizing Properties	No data available		

**Other Information**

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	8.44

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
56.09	58.56	4.74	567.9

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available. Harmful if inhaled. (based on components).
Eye Contact	Specific test data for the substance or mixture is not available.
Skin Contact	Specific test data for the substance or mixture is not available. Harmful in contact with skin. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Component	Oral LD50
2-Butoxyethanol 111-76-2	= 470 mg/kg ( Rat )

Component	Dermal LD50
2-Butoxyethanol 111-76-2	= 99 mg/kg ( Rabbit )

Component	Inhalation LC50
2-Butoxyethanol 111-76-2	= 450 ppm ( Rat ) 4 h = 486 ppm ( Rat ) 4 h

### Information on toxicological effects

Symptoms	Specific test data for the substance or mixture is not available.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Specific test data for the substance or mixture is not available. Causes skin irritation (pain, redness and swelling). (based on components).
Eye damage/irritation	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
Irritation	Specific test data for the substance or mixture is not available.
Corrosivity	Specific test data for the substance or mixture is not available.
Sensitization	Specific test data for the substance or mixture is not available.
Mutagenic Effects	Specific test data for the substance or mixture is not available.
Carcinogenic effects	Specific test data for the substance or mixture is not available.

<b>Reproductive Effects</b>	Specific test data for the substance or mixture is not available.
<b>STOT - single exposure</b>	Specific test data for the substance or mixture is not available.
<b>STOT - repeated exposure</b>	Specific test data for the substance or mixture is not available.
<b>Chronic Toxicity</b>	Specific test data for the substance or mixture is not available.
<b>Aspiration hazard</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
2-Butoxyethanol 111-76-2	A3

#### Numerical measures of toxicity - Product Information

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	893.00 mg/kg
ATEmix (dermal)	1,964.00 mg/kg mg/l
ATEmix (inhalation-dust/mist)	2.70 mg/l
ATEmix (inhalation-vapor)	20.00 mg/l

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Specific test data for the substance or mixture is not available.

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Fish
2-Butoxyethanol 111-76-2	96h LC50 <i>Lepomis macrochirus</i> : = 2950 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 1490 mg/L (static)

Component	Crustacea
2-Butoxyethanol 111-76-2	48h EC50 <i>Daphnia magna</i> : > 1000 mg/L

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available.

Component	Partition coefficient
2-Butoxyethanol 111-76-2	0.81

#### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

##### Waste Disposal Methods

Contain and dispose of waste according to local regulations.

##### Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

#### 14. TRANSPORT INFORMATION

**Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

Proper Shipping Name

Not regulated

Printing Ink

**ICAO / IATA / IMDG / IMO**

Proper Shipping Name

Not Regulated

Printing Ink

#### 15. REGULATORY INFORMATION

**International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Butoxyethanol	111-76-2	30 - 60	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
2-Butoxyethanol	111-76-2	30 - 60

**U.S. State Regulations**

Component	Massachusetts Right To Know
2-Butoxyethanol 111-76-2	X

Component	Minnesota Right To Know
2-Butoxyethanol 111-76-2	X

Component	New Jersey Right To Know
2-Butoxyethanol 111-76-2	X

Component	Pennsylvania Right To Know
2-Butoxyethanol 111-76-2	X

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects

**Canada**

Component	NPRI - National Pollutant Release Inventory
2-Butoxyethanol 111-76-2	Part 5, Individual Substances; Part 4 Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

HMIS:	Health	Flammability	Reactivity	Personal Protection
	2 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

- Known - Known Carcinogen
- Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

Revision Date

Aug-17-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Published Date  
Aug-17-2018

Revision Date  
Aug-17-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code **9719**  
Product name **Fire Red**  
Product category **9700 Series SV Screen Ink**

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Acute toxicity - Inhalation (Vapors)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

**Label elements**



**Signal Word**

Warning

**Hazard Statements**

H302 - Harmful if swallowed  
H312 - Harmful in contact with skin

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P330 - Rinse mouth  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P332 + P313 - If skin irritation occurs: Get medical advice/attention  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Hazards not otherwise classified (HNOC)**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
2-Butoxyethanol	111-76-2	30 - 60	*	
Resin	Trade Secret	1 - 5	*	

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. FIRST AID MEASURES****Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention. Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Inhalation****Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

**Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure limits**

Component	ACGIH TLV
2-Butoxyethanol 111-76-2	TWA: 20 ppm

Component	OSHA PEL
2-Butoxyethanol 111-76-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup> Skin

Component	OSHA PEL (vacated)
2-Butoxyethanol 111-76-2	TWA: 25 ppm TWA: 120 mg/m <sup>3</sup> Skin

Component	Ontario TWAEL
2-Butoxyethanol 111-76-2	TWA: 20 ppm

Component	Mexico OEL (TWA)
2-Butoxyethanol	TWA/VLE-PPT: 26 ppm

111-76-2	TWA/VLE-PPT 120 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT 360 mg/m <sup>3</sup>
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**Appropriate engineering controls****Engineering Measures**

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment****Eye/Face Protection**

Wear safety glasses with side shields (or goggles). If splashes are likely to occur. Wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

**Skin Protection**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	62 °C / 143 °F	Pensky Martens Closed Cup (PMCC)	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties	No data available		
Oxidizing Properties	No data available		

**Other Information**

Photochemically Reactive	No
Weight Per Gallon (lbs/gal)	8.35

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
57.44	59.29	4.8	575.06

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO2). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Inhalation

Specific test data for the substance or mixture is not available. Harmful if inhaled. (based on components).

#### Eye Contact

Specific test data for the substance or mixture is not available.

#### Skin Contact

Specific test data for the substance or mixture is not available. Harmful in contact with skin. (based on components).

#### Ingestion

Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

Component	Oral LD50
2-Butoxyethanol 111-76-2	= 470 mg/kg ( Rat )

Component	Dermal LD50
2-Butoxyethanol 111-76-2	= 99 mg/kg ( Rabbit )

Component	Inhalation LC50
2-Butoxyethanol 111-76-2	= 450 ppm ( Rat ) 4 h = 486 ppm ( Rat ) 4 h

### Information on toxicological effects

#### Symptoms

Specific test data for the substance or mixture is not available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Skin corrosion/irritation

Specific test data for the substance or mixture is not available. Causes skin irritation (pain, redness and swelling). (based on components).

#### Eye damage/irritation

Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).

#### Irritation

Specific test data for the substance or mixture is not available.

#### Corrosivity

Specific test data for the substance or mixture is not available.

#### Sensitization

Specific test data for the substance or mixture is not available.

#### Mutagenic Effects

Specific test data for the substance or mixture is not available.

#### Carcinogenic effects

Specific test data for the substance or mixture is not available.

**Reproductive Effects** Specific test data for the substance or mixture is not available.  
**STOT - single exposure** Specific test data for the substance or mixture is not available.  
**STOT - repeated exposure** Specific test data for the substance or mixture is not available.  
**Chronic Toxicity** Specific test data for the substance or mixture is not available.  
**Aspiration hazard** Specific test data for the substance or mixture is not available.  
**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
2-Butoxyethanol 111-76-2	A3

#### Numerical measures of toxicity - Product Information

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 872.00 mg/kg  
 ATEmix (dermal) 1,918.00 mg/kg mg/l  
 ATEmix (inhalation-dust/mist) 2.60 mg/l  
 ATEmix (inhalation-vapor) 19.00 mg/l

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Specific test data for the substance or mixture is not available.

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Fish
2-Butoxyethanol 111-76-2	96h LC50 <i>Lepomis macrochirus</i> = 2950 mg/L 96h LC50 <i>Lepomis macrochirus</i> = 1490 mg/L (static)

Component	Crustacea
2-Butoxyethanol 111-76-2	48h EC50 <i>Daphnia magna</i> : > 1000 mg/L

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available

Component	Partition coefficient
2-Butoxyethanol 111-76-2	0.81

#### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods

#### Waste Disposal Methods

Contain and dispose of waste according to local regulations.

#### Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

#### 14. TRANSPORT INFORMATION

**Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

Proper Shipping Name

 Not regulated  
Printing Ink

**ICAO / IATA / IMDG / IMO**

Proper Shipping Name

 Not Regulated  
Printing Ink

#### 15. REGULATORY INFORMATION

**International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Butoxyethanol	111-76-2	30 - 60	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
2-Butoxyethanol	111-76-2	30 - 60

**U.S. State Regulations**

Component	Massachusetts Right To Know
2-Butoxyethanol 111-76-2	X

Component	Minnesota Right To Know
2-Butoxyethanol 111-76-2	X

Component	New Jersey Right To Know
2-Butoxyethanol 111-76-2	X

Component	Pennsylvania Right To Know
2-Butoxyethanol 111-76-2	X

**California Prop. 65**



This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects

**Canada**

Component	NPRI - National Pollutant Release Inventory
2-Butoxyethanol 111-76-2	Part 5, Individual Substances; Part 4 Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

HMIS:	Health	Flammability	Reactivity	Personal Protection
	2 *	2	0	X

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen  
Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Revision Date**

Aug-17-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

Published Date  
Aug-16-2018

Revision Date  
Aug-16-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code                               **7952**  
Product name                               **Opaque Black**  
Product category                           **7900 Series SV Screen Ink**

**Other means of identification**

Synonyms                                   None

**Recommended use of the chemical and restrictions on use**

Recommended use                       Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Skin Corrosion/Irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Carcinogenicity	Category 2 - (H351)
Aspiration toxicity	Category 1 - (H304)
Chronic aquatic toxicity	Category 2 - (H411)
Flammable liquids	Category 3 - (H226)

**Label elements**



**Signal Word**  
Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation

H319 - Causes serious eye irritation  
 H351 - Suspected of causing cancer  
 H411 - Toxic to aquatic life with long lasting effects  
 H226 - Flammable liquid and vapor

**Precautionary Statements**

P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 - If eye irritation persists: Get medical advice/attention  
 P202 - Do not handle until all safety precautions have been read and understood  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P308 + P313 - IF exposed or concerned: Get medical advice/attention  
 P273 - Avoid release to the environment  
 P331 - Do NOT induce vomiting  
 P233 - Keep container tightly closed  
 P403 + P235 - Store in a well-ventilated place. Keep cool  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Hazards not otherwise classified (HNOC)**

Harmful to aquatic life.

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
--

**Mixture**

Component	CAS-No	Weight %	Trade Secret	Note
Solvent naphtha, petroleum, light aromatic	64742-95-6	10 - 30	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	10 - 30	*	
1,2,4-Trimethylbenzene (constituent)	95-63-6	10 - 30	*	1
Diacetone alcohol	123-42-2	5 - 10	*	
Carbon black	1333-86-4	1 - 5	*	
1,3,5-Trimethylbenzene (constituent)	108-67-8	1 - 5	*	1
Naphthalene (constituent)	91-20-3	1 - 5	*	1
Cumene (constituent)	98-82-8	1 - 5	*	1

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note 1. Type of chemical: Constituent

<b>4. FIRST AID MEASURES</b>
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**Description of first aid measures****General Advice**

Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention. Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

**Inhalation****Ingestion**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

None under normal use conditions.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**

Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal Precautions**

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

**Methods and material for containment and cleaning up**

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

**7. HANDLING AND STORAGE****Precautions for safe handling****Handling**

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities****Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

**Incompatible Products**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure limits**

Component	ACGIH TLV
Diacetone alcohol 123-42-2	TWA: 50 ppm
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable particulate matter
Naphthalene (constituent)	TWA: 10 ppm

91-20-3	Skin
Cumene (constituent) 98-82-8	TWA: 50 ppm

Component	OSHA PEL
Diacetone alcohol 123-42-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup>
Carbon black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>
Cumene (constituent) 98-82-8	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> Skin

Component	OSHA PEL (vacated)
Diacetone alcohol 123-42-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup>
Carbon black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>
Cumene (constituent) 98-82-8	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> Skin

Component	Ontario TWA EV
Diacetone alcohol 123-42-2	TWA: 50 ppm
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Cumene (constituent) 98-82-8	TWA: 50 ppm

Component	Mexico OEL (TWA)
Diacetone alcohol 123-42-2	TWAVLE-PPT: 50 ppm TWAVLE-PPT: 240 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT: 360 mg/m <sup>3</sup>
Carbon black 1333-86-4	TWAVLE-PPT: 3.5 mg/m <sup>3</sup> STEL/PPT-CT: 7 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWAVLE-PPT: 10 ppm TWAVLE-PPT: 50 mg/m <sup>3</sup> STEL/PPT-CT: 15 ppm STEL/PPT-CT: 75 mg/m <sup>3</sup>
Cumene (constituent) 98-82-8	TWAVLE-PPT: 50 ppm TWAVLE-PPT: 245 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT: 365 mg/m <sup>3</sup>

### Appropriate engineering controls

#### **Engineering Measures**

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

### Individual protection measures, such as personal protective equipment

#### **Eye/Face Protection**

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

<b>Skin Protection</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
<b>Respiratory Protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
<b>General Hygiene Considerations</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH		No data available	
Melting Point / Freezing Point		No data available	
Boiling Point / Boiling Range	> 149 °C / 300 °F		
Flash Point	46 °C / 115 °F	Setaflash closed cup	
Evaporation rate		No data available	
Flammability Limit in Air			
Upper flammability limit		No data available	
Lower flammability limit		No data available	
Vapor Pressure		No data available	
Vapor Density		No data available	
Specific Gravity	1.01		
Water Solubility		No data available	
Solubility in other solvents		No data available	
Partition coefficient: n-octanol/water		No data available	
Autoignition Temperature		No data available	
Decomposition temperature		No data available	
Kinematic viscosity		No data available	
Dynamic viscosity		No data available	
Explosive Properties	No data available		
Oxidizing Properties	No data available		

### Other Information

Photochemically Reactive	Yes
Weight Per Gallon (lbs/gal)	8.39

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
50.9	52.84	4.28	512.21

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible materials**

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Inhalation**  
**Eye Contact**  
**Skin Contact**  
**Ingestion**

Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.  
Specific test data for the substance or mixture is not available.

Component	Oral LD50
Solvent naphtha, petroleum, light aromatic 64742-95-6	= 8400 mg/kg ( Rat )
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg ( Rat )
1,2,4-Trimethylbenzene (constituent) 95-63-6	= 3280 mg/kg ( Rat )
Diacetone alcohol 123-42-2	> 4 g/kg ( Rat )
Carbon black 1333-86-4	> 15400 mg/kg ( Rat )
Naphthalene (constituent) 91-20-3	= 1110 mg/kg ( Rat )
Cumene (constituent) 98-82-8	= 1400 mg/kg ( Rat )

Component	Dermal LD50
Solvent naphtha, petroleum, light aromatic 64742-95-6	> 2000 mg/kg ( Rabbit )
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2 mL/kg ( Rabbit )
1,2,4-Trimethylbenzene (constituent) 95-63-6	> 3160 mg/kg ( Rabbit )
Diacetone alcohol 123-42-2	= 13630 mg/kg ( Rabbit )
Naphthalene (constituent) 91-20-3	= 1120 mg/kg ( Rabbit )
Cumene (constituent) 98-82-8	= 12300 µL/kg ( Rabbit )

Component	Inhalation LC50
Solvent naphtha, petroleum, light aromatic 64742-95-6	= 3400 ppm ( Rat ) 4 h
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
1,2,4-Trimethylbenzene (constituent) 95-63-6	= 18 g/m <sup>3</sup> ( Rat ) 4 h
Diacetone alcohol 123-42-2	> 7.23 g/m <sup>3</sup> ( Rat ) 8 h
1,3,5-Trimethylbenzene (constituent) 108-67-8	= 24 g/m <sup>3</sup> ( Rat ) 4 h
Naphthalene (constituent) 91-20-3	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
Cumene (constituent) 98-82-8	> 3577 ppm ( Rat ) 6 h

**Information on toxicological effects**

**Symptoms**

Specific test data for the substance or mixture is not available.



**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Specific test data for the substance or mixture is not available. Causes skin irritation (pain, redness and swelling). (based on components).
<b>Eye damage/irritation</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
<b>Irritation</b>	Specific test data for the substance or mixture is not available.
<b>Corrosivity</b>	Specific test data for the substance or mixture is not available.
<b>Sensitization</b>	Specific test data for the substance or mixture is not available.
<b>Mutagenic Effects</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenic effects</b>	Specific test data for the substance or mixture is not available. Suspected of causing cancer. (based on components).
<b>Reproductive Effects</b>	Specific test data for the substance or mixture is not available.
<b>STOT - single exposure</b>	Specific test data for the substance or mixture is not available.
<b>STOT - repeated exposure</b>	Specific test data for the substance or mixture is not available.
<b>Chronic Toxicity</b>	Specific test data for the substance or mixture is not available.
<b>Aspiration hazard</b>	Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Carbon black 1333-86-4	A3
Naphthalene (constituent) 91-20-3	A3

Component	IARC
Carbon black 1333-86-4	Group 2B
Naphthalene (constituent) 91-20-3	Group 2B
Cumene (constituent) 98-82-8	Group 2B

Component	NTP
Naphthalene (constituent) 91-20-3	Reasonably Anticipated
Cumene (constituent) 98-82-8	Reasonably Anticipated

Component	OSHA
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

<b>ATEmix (oral)</b>	66,343.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	13.90 mg/l
<b>ATEmix (inhalation-vapor)</b>	102.00

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Specific test data for the substance or mixture is not available. Toxic to aquatic life with long lasting effects. (based on components).

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
Cumene (constituent) 98-82-8	72h EC50 <i>Pseudokirchneriella subcapitata</i> : = 2.6 mg/L

Component	Fish
Solvent naphtha, petroleum, light aromatic 64742-95-6	96h LC50 <i>Oncorhynchus mykiss</i> : = 9.22 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	96h LC50 <i>Pimephales promelas</i> : = 19 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.34 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 1740 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : = 45 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 41 mg/L
1,2,4-Trimethylbenzene (constituent) 95-63-6	96h LC50 <i>Pimephales promelas</i> : 7.19 - 8.28 mg/L (flow-through)
Diacetone alcohol 123-42-2	96h LC50 <i>Lepomis macrochirus</i> : = 420 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 420 mg/L
1,3,5-Trimethylbenzene (constituent) 108-67-8	96h LC50 <i>Pimephales promelas</i> : = 3.48 mg/L
Naphthalene (constituent) 91-20-3	96h LC50 <i>Pimephales promelas</i> : 5.74 - 6.44 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 1.99 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 31.0265 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 1.6 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : 0.91 - 2.82 mg/L (static)
Cumene (constituent) 98-82-8	96h LC50 <i>Oncorhynchus mykiss</i> : = 4.8 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 5.1 mg/L (semi-static) 96h LC50 <i>Pimephales promelas</i> : 6.04 - 6.61 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.7 mg/L (semi-static)

Component	Crustacea
Solvent naphtha, petroleum, light aromatic 64742-95-6	48h EC50 <i>Daphnia magna</i> : = 6.14 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	48h EC50 <i>Daphnia magna</i> : = 0.95 mg/L
1,2,4-Trimethylbenzene (constituent) 95-63-6	48h EC50 <i>Daphnia magna</i> : = 6.14 mg/L
Naphthalene (constituent) 91-20-3	48h EC50 <i>Daphnia magna</i> : 1.09 - 3.4 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 1.96 mg/L Flow through 48h LC50 <i>Daphnia magna</i> : = 2.16 mg/L
Cumene (constituent) 98-82-8	48h EC50 <i>Daphnia magna</i> : 7.9 - 14.1 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 0.6 mg/L

#### Persistence and Degradability

No information available.

#### Bioaccumulation

No information available

Component	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.9 - 6.1
1,2,4-Trimethylbenzene (constituent) 95-63-6	3.63
Diacetone alcohol 123-42-2	1.03
Naphthalene (constituent) 91-20-3	3.6
Cumene (constituent) 98-82-8	3.7

#### Other adverse effects

No information available

### 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**ICAO / IATA / IMDG / IMO**

UN/ID no.  
Proper Shipping Name  
Hazard Class  
Packing Group

UN1210  
Printing Ink  
3  
III

**15. REGULATORY INFORMATION****International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
1,2,4-Trimethylbenzene (constituent)	95-63-6	10 - 30	1.0
Naphthalene (constituent)	91-20-3	1 - 5	0.1
Cumene (constituent)	98-82-8	1 - 5	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
Naphthalene (constituent)	91-20-3	1 - 5
Cumene (constituent)	98-82-8	1 - 5
Xylenes (o-, m-, p- isomers) (constituent)	1330-20-7	< 1
Chlorobenzene	108-90-7	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
Carbon black 1333-86-4	X
1,3,5-Trimethylbenzene (constituent) 108-67-8	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

Component	Minnesota Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

Component	New Jersey Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

Component	Pennsylvania Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
Carbon black 1333-86-4	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Carbon black	Carcinogen
Naphthalene (constituent)	Carcinogen
Cumene (constituent)	Carcinogen

- This product contains carbon black in a non-respirable form. Inhalation of carbon black is unlikely to occur from exposure to this product

**Canada**

Component	NPRI - National Pollutant Release Inventory
Solvent naphtha, petroleum, light aromatic 64742-95-6	Part 5, Other Groups and Mixtures
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5, Other Groups and Mixtures; Part 4 Substance
1,2,4-Trimethylbenzene (constituent) 95-63-6	Part 5, Individual Substances; Part 4 Substance
Diacetone alcohol 123-42-2	Part 4 Substance
1,3,5-Trimethylbenzene (constituent) 108-67-8	Part 5, Isomer Groups; Part 4 Substance
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance; Part 4 Substance
Cumene (constituent) 98-82-8	Part 1, Group A Substance; Part 4 Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

<b>16. OTHER INFORMATION</b>
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<b>HMIS:</b>	<b>Health</b> 2 *	<b>Flammability</b> 2	<b>Reactivity</b> 0	<b>Personal Protection</b> X
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**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen  
Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

Revision Date

Aug-16-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Published Date  
Aug-20-2018

Revision Date  
Aug-16-2018

Revision Number  
2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product identifier**

Product code 7919  
Product name Fire Red  
Product category 7900 Series SV Screen Ink

**Other means of identification**

Synonyms None

**Recommended use of the chemical and restrictions on use**

Recommended use Printing operations

**Details of the supplier of the safety data sheet**

UNITED STATES	UNITED KINGDOM
Nazdar Company	Nazdar Limited
8501 Hedge Lane Terrace	Barton Road
Shawnee, KS 66227	Heaton Mersey
Tel: +001-913-422-1888	Stockport, England SK4 3EG
Tel: +001-800-677-4657	Tel: +44 161 442 2111
Fax: +001-913-422-2294	
www.nazdar.com	

**Emergency telephone number**

USA: Chemtrec: +001-800-424-9300  
Outside USA: Chemtrec: +001-703-527-3887  
24 Hour Emergency Phone Number

### 2. HAZARDS IDENTIFICATION

**Classification**

Skin Corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Carcinogenicity	Category 2 - (H351)
Aspiration toxicity	Category 1 - (H304)
Chronic aquatic toxicity	Category 2 - (H411)
Flammable liquids	Category 3 - (H226)

**Label elements**



**Signal Word**  
Danger

**Hazard Statements**

H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation

H319 - Causes serious eye irritation  
 H351 - Suspected of causing cancer  
 H411 - Toxic to aquatic life with long lasting effects  
 H226 - Flammable liquid and vapor

#### Precautionary Statements

P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 - If eye irritation persists: Get medical advice/attention  
 P202 - Do not handle until all safety precautions have been read and understood  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P308 + P313 - IF exposed or concerned: Get medical advice/attention  
 P273 - Avoid release to the environment  
 P331 - Do NOT induce vomiting  
 P233 - Keep container tightly closed  
 P403 + P235 - Store in a well-ventilated place. Keep cool  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

#### Hazards not otherwise classified (HNOC)

Harmful to aquatic life.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Mixture

Component	CAS-No	Weight %	Trade Secret	Note
Solvent naphtha, petroleum, light aromatic	64742-95-6	10 - 30	*	
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	10 - 30	*	
1,2,4-Trimethylbenzene (constituent)	95-63-6	10 - 30	*	1
Diacetone alcohol	123-42-2	1 - 5	*	
1,3,5-Trimethylbenzene (constituent)	108-67-8	1 - 5	*	1
Naphthalene (constituent)	91-20-3	1 - 5	*	1
Cumene (constituent)	98-82-8	1 - 5	*	1

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

Note 1: Type of chemical: Constituent

### 4. FIRST AID MEASURES

#### Description of first aid measures

##### General Advice

Show this safety data sheet to the doctor in attendance.

##### Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention if irritation develops and persists.

##### Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation (redness, rash, blistering) develops, get medical attention.

##### Inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately.

##### Ingestion

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

#### Most important symptoms and effects, both acute and delayed

None under normal use conditions.

#### Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

Treat symptomatically.



## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical, Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### Unsuitable Extinguishing Media

No information available.

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. May emit toxic fumes under fire conditions.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray. Sealed containers may rupture when heated.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

#### Personal Precautions

Remove all sources of ignition. Ventilate the area. Avoid contact with eyes, skin and clothing. Avoid breathing dust or vapor. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### Environmental precautions

Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained.

#### Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Use clean non-sparking tools to collect absorbed material.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Handling

Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Ensure adequate ventilation.

### Conditions for safe storage, including any incompatibilities

#### Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Keep out of the reach of children.

#### Incompatible Products

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure limits

Component	ACGIH TLV
Diacetone alcohol 123-42-2	TWA: 50 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Cumene (constituent) 98-82-8	TWA: 50 ppm

Component	OSHA PEL
Diacetone alcohol 123-42-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>
Cumene (constituent) 98-82-8	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> Skin

Component	OSHA PEL (vacated)
Diacetone alcohol 123-42-2	TWA: 50 ppm TWA: 240 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup> STEL: 15 ppm STEL: 75 mg/m <sup>3</sup>
Cumene (constituent) 98-82-8	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> Skin

Component	Ontario TWA EV
Diacetone alcohol 123-42-2	TWA: 50 ppm
Naphthalene (constituent) 91-20-3	TWA: 10 ppm Skin
Cumene (constituent) 98-82-8	TWA: 50 ppm

Component	Mexico OEL (TWA)
Diacetone alcohol 123-42-2	TWA/VLE-PPT: 50 ppm TWA/VLE-PPT: 240 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT: 360 mg/m <sup>3</sup>
Naphthalene (constituent) 91-20-3	TWA/VLE-PPT: 10 ppm TWA/VLE-PPT: 50 mg/m <sup>3</sup> STEL/PPT-CT: 15 ppm STEL/PPT-CT: 75 mg/m <sup>3</sup>
Cumene (constituent) 98-82-8	TWA/VLE-PPT: 50 ppm TWA/VLE-PPT: 245 mg/m <sup>3</sup> STEL/PPT-CT: 75 ppm STEL/PPT-CT: 365 mg/m <sup>3</sup>

### **Appropriate engineering controls**

#### **Engineering Measures**

Provide a good standard of general ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Users are advised to consider national Occupational Exposure Limits or other equivalent values. In case of insufficient ventilation, wear suitable respiratory equipment.

### **Individual protection measures, such as personal protective equipment**

#### **Eye/Face Protection**

Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear suitable face shield. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Skin Protection**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

#### **Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

#### **General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking or smoking. Wash contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection. Regular cleaning of

equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Colored Liquid
Odor	Characteristic	Odor Threshold	No information available

Property	Values	Remarks • Method
pH		No data available
Melting Point / Freezing Point		No data available
Boiling Point / Boiling Range	> 149 °C / 300 °F	
Flash Point	46 °C / 115 °F	Setaflash closed cup
Evaporation rate		No data available
Flammability Limit in Air		
Upper flammability limit		No data available
Lower flammability limit		No data available
Vapor Pressure		No data available
Vapor Density		No data available
Specific Gravity	1	
Water Solubility		No data available
Solubility in other solvents		No data available
Partition coefficient: n-octanol/water		No data available
Autoignition Temperature		No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity		No data available

Explosive Properties	No data available
Oxidizing Properties	No data available

### Other Information

Photochemically Reactive	Yes
Weight Per Gallon (lbs/gal)	8.36

VOC by weight % (less water)	VOC by volume % (less water)	VOC lbs/gal (less water)	VOC grams/liter (less water)
51.31	No information available	4.29	513.71

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

### Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Reducing agent.

### Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye Contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin Contact</b>	Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

Component	Oral LD50
Solvent naphtha, petroleum, light aromatic 64742-95-6	= 8400 mg/kg ( Rat )
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 5000 mg/kg ( Rat )
1,2,4-Trimethylbenzene (constituent) 95-63-6	= 3280 mg/kg ( Rat )
Diacetone alcohol 123-42-2	> 4 g/kg ( Rat )
Naphthalene (constituent) 91-20-3	= 1110 mg/kg ( Rat )
Cumene (constituent) 98-82-8	= 1400 mg/kg ( Rat )

Component	Dermal LD50
Solvent naphtha, petroleum, light aromatic 64742-95-6	> 2000 mg/kg ( Rabbit )
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 2 mL/kg ( Rabbit )
1,2,4-Trimethylbenzene (constituent) 95-63-6	> 3160 mg/kg ( Rabbit )
Diacetone alcohol 123-42-2	= 13630 mg/kg ( Rabbit )
Naphthalene (constituent) 91-20-3	= 1120 mg/kg ( Rabbit )
Cumene (constituent) 98-82-8	= 12300 µL/kg ( Rabbit )

Component	Inhalation LC50
Solvent naphtha, petroleum, light aromatic 64742-95-6	= 3400 ppm ( Rat ) 4 h
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
1,2,4-Trimethylbenzene (constituent) 95-63-6	= 18 g/m <sup>3</sup> ( Rat ) 4 h
Diacetone alcohol 123-42-2	> 7.23 g/m <sup>3</sup> ( Rat ) 8 h
1,3,5-Trimethylbenzene (constituent) 108-67-8	= 24 g/m <sup>3</sup> ( Rat ) 4 h
Naphthalene (constituent) 91-20-3	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
Cumene (constituent) 98-82-8	> 3577 ppm ( Rat ) 6 h

**Information on toxicological effects**

**Symptoms** Specific test data for the substance or mixture is not available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Specific test data for the substance or mixture is not available. Causes skin irritation (pain, redness and swelling). (based on components).
<b>Eye damage/irritation</b>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
<b>Irritation</b>	Specific test data for the substance or mixture is not available.
<b>Corrosivity</b>	Specific test data for the substance or mixture is not available.
<b>Sensitization</b>	Specific test data for the substance or mixture is not available.
<b>Mutagenic Effects</b>	Specific test data for the substance or mixture is not available.
<b>Carcinogenic effects</b>	Specific test data for the substance or mixture is not available. Suspected of causing

**Reproductive Effects**  
**STOT - single exposure**  
**STOT - repeated exposure**  
**Chronic Toxicity**  
**Aspiration hazard**

cancer. (based on components).

Specific test data for the substance or mixture is not available.

Specific test data for the substance or mixture is not available.

Specific test data for the substance or mixture is not available.

Specific test data for the substance or mixture is not available.

Specific test data for the substance or mixture is not available. May be fatal if swallowed and enters airways. (based on components).

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH
Naphthalene (constituent) 91-20-3	A3

Component	IARC
Naphthalene (constituent) 91-20-3	Group 2B
Cumene (constituent) 98-82-8	Group 2B

Component	NTP
Naphthalene (constituent) 91-20-3	Reasonably Anticipated
Cumene (constituent) 98-82-8	Reasonably Anticipated

Component	OSHA
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

**Numerical measures of toxicity - Product Information**

**Unknown Acute Toxicity** 0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 69,276.00 mg/kg  
 ATEmix (inhalation-dust/mist) 13.10 mg/l  
 ATEmix (inhalation-vapor) 96.00

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Specific test data for the substance or mixture is not available. Toxic to aquatic life with long lasting effects. (based on components).

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Component	Algae/aquatic plants
Cumene (constituent) 98-82-8	72h EC50 <i>Pseudokirchneriella subcapitata</i> : = 2.6 mg/L

Component	Fish
Solvent naphtha, petroleum, light aromatic 64742-95-6	96h LC50 <i>Oncorhynchus mykiss</i> : = 9.22 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	96h LC50 <i>Pimephales promelas</i> : = 19 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.34 mg/L 96h LC50 <i>Lepomis macrochirus</i> : = 1740 mg/L (static) 96h LC50 <i>Pimephales promelas</i> : = 45 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 41 mg/L
1,2,4-Trimethylbenzene (constituent) 95-63-6	96h LC50 <i>Pimephales promelas</i> : 7.19 - 8.28 mg/L (flow-through)
Diacetone alcohol 123-42-2	96h LC50 <i>Lepomis macrochirus</i> : = 420 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 420 mg/L

1,3,5-Trimethylbenzene (constituent) 108-67-8	96h LC50 <i>Pimephales promelas</i> = 3.48 mg/L
Naphthalene (constituent) 91-20-3	96h LC50 <i>Pimephales promelas</i> : 5.74 - 6.44 mg/L (flow-through) 96h LC50 <i>Pimephales promelas</i> : = 1.99 mg/L (static) 96h LC50 <i>Lepomis macrochirus</i> : = 31,0265 mg/L (static) 96h LC50 <i>Oncorhynchus mykiss</i> : = 1.6 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : 0.91 - 2.82 mg/L (static)
Cumene (constituent) 98-82-8	96h LC50 <i>Oncorhynchus mykiss</i> : = 4.8 mg/L (flow-through) 96h LC50 <i>Poecilia reticulata</i> : = 5.1 mg/L (semi-static) 96h LC50 <i>Pimephales promelas</i> : 6.04 - 6.61 mg/L (flow-through) 96h LC50 <i>Oncorhynchus mykiss</i> : = 2.7 mg/L (semi-static)

Component	Crustacea
Solvent naphtha, petroleum, light aromatic 64742-95-6	48h EC50 <i>Daphnia magna</i> : = 6.14 mg/L
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	48h EC50 <i>Daphnia magna</i> : = 0.95 mg/L
1,2,4-Trimethylbenzene (constituent) 95-63-6	48h EC50 <i>Daphnia magna</i> : = 6.14 mg/L
Naphthalene (constituent) 91-20-3	48h EC50 <i>Daphnia magna</i> : 1.09 - 3.4 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 1.96 mg/L Flow through 48h LC50 <i>Daphnia magna</i> : = 2.16 mg/L
Cumene (constituent) 98-82-8	48h EC50 <i>Daphnia magna</i> : 7.9 - 14.1 mg/L Static 48h EC50 <i>Daphnia magna</i> : = 0.6 mg/L

**Persistence and Degradability**

No information available.

**Bioaccumulation**

No information available

Component	Partition coefficient
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	2.9 - 6.1
1,2,4-Trimethylbenzene (constituent) 95-63-6	3.63
Diacetone alcohol 123-42-2	1.03
Naphthalene (constituent) 91-20-3	3.6
Cumene (constituent) 98-82-8	3.7

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste Disposal Methods**

Contain and dispose of waste according to local regulations.

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****Note:**

This information is not intended to convey all specific transportation requirements relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation information can be found in the specific regulations for your mode of transportation. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

**DOT**

In the U.S. and Canada, this material may be reclassified as a combustible liquid and is not

regulated, via surface transportation, in containers less than 119 gallons or 450 liters [per 49 CFR 173.150 (f)] [per Transportation of Dangerous Goods Regulations/Clear Language Part 1.33].

UN/ID no. UN1210  
 Proper Shipping Name Printing Ink  
 Hazard Class 3  
 Packing Group III

**ICAO / IATA / IMDG / IMO**

UN/ID no. UN1210  
 Proper Shipping Name Printing Ink  
 Hazard Class 3  
 Packing Group III

**15. REGULATORY INFORMATION****International Inventories**

All components are listed on the TSCA Inventory. For further information, please contact: Supplier (manufacturer/importer/downstream user/distributor).

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
1,2,4-Trimethylbenzene (constituent)	95-63-6	10 - 30	1.0
Naphthalene (constituent)	91-20-3	1 - 5	0.1
Cumene (constituent)	98-82-8	1 - 5	1.0

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Component	CAS-No	Weight %
Naphthalene (constituent)	91-20-3	1 - 5
Cumene (constituent)	98-82-8	1 - 5
Xylenes (o-, m-, p- isomers) (constituent)	1330-20-7	< 1
Chlorobenzene	108-90-7	< 0.5

**U.S. State Regulations**

Component	Massachusetts Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
1,3,5-Trimethylbenzene (constituent) 108-67-8	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

Component	Minnesota Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol	X



123-42-2	
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

Component	New Jersey Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

Component	Pennsylvania Right To Know
1,2,4-Trimethylbenzene (constituent) 95-63-6	X
Diacetone alcohol 123-42-2	X
Naphthalene (constituent) 91-20-3	X
Cumene (constituent) 98-82-8	X

**California Prop. 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm

Component	California Prop. 65
Naphthalene (constituent)	Carcinogen
Cumene (constituent)	Carcinogen

**Canada**

Component	NPRI - National Pollutant Release Inventory
Solvent naphtha, petroleum, light aromatic 64742-95-6	Part 5, Other Groups and Mixtures
Solvent naphtha, petroleum, heavy aromatic 64742-94-5	Part 5, Other Groups and Mixtures; Part 4 Substance
1,2,4-Trimethylbenzene (constituent) 95-63-6	Part 5, Individual Substances; Part 4 Substance
Diacetone alcohol 123-42-2	Part 4 Substance
1,3,5-Trimethylbenzene (constituent) 108-67-8	Part 5, Isomer Groups; Part 4 Substance
Naphthalene (constituent) 91-20-3	Part 1, Group A Substance; Part 4 Substance
Cumene (constituent) 98-82-8	Part 1, Group A Substance; Part 4 Substance

**Pursuant to NOM-018-STPS-2015**

This information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

**16. OTHER INFORMATION**

<b>HMIS:</b>	<b>Health</b> 2 *	<b>Flammability</b> 2	<b>Reactivity</b> 0	<b>Personal Protection</b> X
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**Key or legend to abbreviations and acronyms used in the safety data sheet**

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**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value

**ACGIH: (American Conference of Governmental Industrial Hygienists)**

A1 - Known Human Carcinogen  
A2 - Suspected Human Carcinogen  
A3 - Animal Carcinogen

**IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans  
Group 2A - Probably Carcinogenic to Humans  
Group 2B - Possibly Carcinogenic to Humans

**NTP: (National Toxicity Program)**

Known - Known Carcinogen  
Reasonably Anticipated to be a Human Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Revision Date**

Aug-16-2018

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



## Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

### 1.1 Product identifier

**Product Name** • UDC-2, UDC HV, UDC HV Z-1, UDC HV Z-2  
**Product Description** • Red, blue, purple or clear liquid.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified use(s)** • Water-based emulsion

### 1.3 Details of the supplier of the safety data sheet

**Manufacturer** • IKONICS Corporation  
4832 Grand Ave.  
Duluth, MN 55807  
United States  
www.ikonics.com  
sds@ikonics.com

**Telephone (General)** • (218) 628-2217

**Telephone (General)** • (800) 328-4261

### 1.4 Emergency telephone number

**Chemtrec** • 1-800-424-9300  
• +1 703-527-3887

## Section 2: Hazards Identification

### EU/EEC

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

### 2.1 Classification of the substance or mixture

**CLP** • Hazardous to the aquatic environment Chronic 3 - H412  
**DSD/DPD** • R52/53

### 2.2 Label Elements

**CLP**

**Hazard statements** • H412 - Harmful to aquatic life with long lasting effects

#### Precautionary statements

**Prevention** • P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**Response** • P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical advice/attention.

**Storage/Disposal** • P501 - Dispose of content and/or container in accordance with local, regional, national,

and/or international regulations

#### DSD/DPD

**Risk phrases** • R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### 2.3 Other Hazards

##### CLP

• No data available

##### DSD/DPD

• No data available

#### UN GHS

According to Third Revised Edition

#### 2.1 Classification of the substance or mixture

##### UN GHS

• Hazardous to the aquatic environment Chronic 3 - H412

#### 2.2 Label elements

##### UN GHS

**Hazard statements** • H412 - Harmful to aquatic life with long lasting effects

##### Precautionary statements

**Prevention** • P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**Response** • P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 - If eye irritation persists: Get medical advice/attention.

**Storage/Disposal** • P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### 2.3 Other hazards

##### UN GHS

• No data available

#### United States (US)

According to OSHA 29 CFR 1910.1200 HCS

#### 2.1 Classification of the substance or mixture

##### OSHA HCS 2012

• Not classified

#### 2.2 Label elements

##### OSHA HCS 2012

##### Precautionary statements

**Prevention** • Avoid release to the environment. - P273

Wear protective gloves/protective clothing/eye protection/face protection. - P280

**Response** • IF ON SKIN: Wash with plenty of soap and water. - P302+P352

If skin irritation occurs: Get medical advice/attention. - P332+P313

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338

If eye irritation persists: Get medical advice/attention. - P337+P313

**Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. - P501

#### 2.3 Other hazards

##### OSHA HCS 2012

• No data available

Canada  
According to WHMIS

## 2.1 Classification of the substance or mixture

WHMIS • Not classified

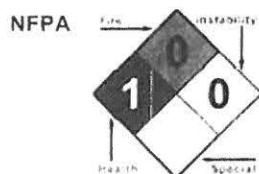
## 2.2 Label elements

WHMIS • No data available

## 2.3 Other hazards

WHMIS • No data available

## 2.4 Other information



## Section 3 - Composition/Information on Ingredients

### 3.1 Substances

### 3.2 Mixtures

Hazardous Components					
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	CAS:52408-84-1	3% TO 4%		WHMIS: UN GHS: Eye Irrit 2A; Skin Irrit 2 EU DSD/DPD: Irritant(Xi); R36/37 EU CLP: Eye Irrit 2; Skin Irrit 2	
Benzophenone	CAS:119-61-9 EINECS:204-337-6	1% TO 2%	Ingestion/Oral-Rat LD50 • >10 g/kg Skin-Rabbit LD50 • 3535 mg/kg	WHMIS: Other Toxic Effects - D2B UN GHS: Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit 2A; Skin Irrit 3 EU DSD/DPD: R36/38; R50/53 EU CLP: Aquatic Acute 1; Aquatic Chronic 1; Eye Irrit 2; Skin Irrit 2 OSHA HCS 2012:	
1-hydroxycyclohexyl phenyl ketone	CAS:947-19-3 EC Number:213-426-9 EINECS:213-426-9	0.5% TO 1.5%		WHMIS: UN GHS: Acute Tox 5; Eye Irrit 2A; Skin Irrit 2 EU DSD/DPD: R36/37/38 EU CLP: Eye Irrit 2; Skin Irrit 2	
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	CAS:119313-12-1 EC Number:404-360-3	0.3% TO 0.6%	Ingestion/Oral-Rat LD50 • >2000 mg/kg Skin-Rat LD50 • >=2000 mg/kg	WHMIS: UN GHS: Aquatic Acute 1; Aquatic Chronic 1 EU DSD/DPD: Environment(N), R50; R53 EU CLP: Aquatic Acute 1; Aquatic Chronic 1	

**Key to abbreviations**

= See Section 16 for full text of R and S phrases.

See Section 11 for Toxicological Information

## **Section 4 - First Aid Measures**

### **4.1 Description of first aid measures**

- |                   |  |
|-------------------|--|
| <b>Inhalation</b> | <ul style="list-style-type: none"><li>• IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration and call 911 or emergency medical service.</li></ul>     |
| <b>Skin</b>       | <ul style="list-style-type: none"><li>• IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.</li></ul>   |
| <b>Eye</b>        | <ul style="list-style-type: none"><li>• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.</li></ul>                               |
| <b>Ingestion</b>  | <ul style="list-style-type: none"><li>• If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth. Never give anything by mouth to an unconscious person. If large quantities are swallowed, call a physician immediately.</li></ul> |

### **4.2 Most important symptoms and effects, both acute and delayed**

- Refer to Section 11 - Toxicological Information.

### **4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**      • No data available.

**Antidotes**      • No data available.

### **4.4 Other information**

- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

## **Section 5 - Firefighting Measures**

### **5.1 Extinguishing media**

**Suitable Extinguishing Media**      • SMALL FIRES: Dry chemical, CO<sub>2</sub>, water spray or regular foam.  
  • LARGE FIRE: Water spray, fog or regular foam.

**Unsuitable Extinguishing Media**      • No data available.

**Firefighting Procedures**      • Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep unauthorized personnel away. Ventilate closed spaces before entering.  
  • LARGE FIRES: Use extinguishing agent suitable for type of surrounding fire.

### **5.2 Special hazards arising from the substance or mixture**

**Unusual Fire and Explosion Hazards**      • Some of these materials may burn, but none ignite readily.

**Hazardous Combustion Products**      • Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

### **5.3 Advice for firefighters**

- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.  
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.  
Wear positive pressure self-contained breathing apparatus (SCBA).

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material. Contact may irritate or burn skin and eyes.
- Emergency Procedures**
- No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

### 6.2 Environmental precautions

- LARGE SPILLS: Prevent entry into waterways, sewers, basements or confined areas.

### 6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Use appropriate Personal Protective Equipment (PPE). Contain and/or absorb spill with inert material (e.g. sand, vermiculite); then place in suitable container.

### 6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

- Handling**
- Use good safety and industrial hygiene practices. Do not expose to sunlight or white room light. Handle under yellow room lights to prevent polymerization due to UV exposure.

### 7.2 Conditions for safe storage, including any incompatibilities

- Storage**
- Keep container closed when not in use. Store away from extreme heat. Do not freeze.
- Special Packaging Materials**
- Package in opaque containers and/or use additional light-blocking materials.

### 7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

- Exposure Limits/Guidelines**
- No data available.

### 8.2 Exposure controls

- Engineering Measures/Controls**
- Local exhaust is recommended but not required. Provide adequate ventilation as necessary.

#### Personal Protective Equipment

##### Pictograms



- Respiratory**
- In case of insufficient ventilation, wear suitable respiratory equipment.
- Eye/Face**
- Wear protective eyewear (goggles, face shield, or safety glasses).
- Hands**
- Wear protective gloves – rubber or neoprene.
- Skin/Body**
- Wear protective clothing – apron or other impervious body coverings.
- General Industrial Hygiene Considerations**
- Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.
- Environmental Exposure Controls**
- No data available



## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Viscous liquid
Color	Red, blue, purple or clear	Odor	No data available
Taste	Not relevant	Odor Threshold	No data available
Physical and Chemical Properties	Not relevant		
General Properties			
Boiling Point	100 C(212 F)	Melting Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	Not relevant	Density	1.06 g/mL
Bulk Density	8.82 lbs/gal	Water Solubility	Dispersible
Solvent Solubility	Not relevant	Viscosity	No data available
Explosive Properties	Classification criteria not met.	Oxidizing Properties	Classification criteria not met.
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available	VOC (Wt.)	Not relevant
VOC (Vol.)	Not relevant	Volatiles (Wt.)	60 to 70 %
Flammability			
Flash Point	> 200 F(> 93.333 C)	UEL	No data available
LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	Not relevant		
Environmental			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	No data available	Bioaccumulation Factor	No data available
Bioconcentration Factor	No data available	Biochemical Oxygen Demand BOD/BOD5	No data available
Chemical Oxygen Demand	No data available	Persistence	No data available
Degradation	No data available		

### 9.2 Other Information

- Polymerizes to solid/semisolid form upon exposure to UV radiation.

## Section 10: Stability and Reactivity

### 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

- UV reactive.

### 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

- Excess heat. Direct sunlight. Avoid freezing.

### 10.5 Incompatible materials

- No data available.

### 10.6 Hazardous decomposition products

- Hazardous decomposition products formed under fire conditions - carbon oxides, nitrogen oxides.  
No decomposition is expected under normal storage and use conditions.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Component Name	CAS	Data
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl) (0.3% TO 0.6%)	119313-12-1	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • >2000 mg/kg; Skin-Rat LD50 • >=2000 mg/kg
GHS Properties	Classification	
Acute toxicity	EU/CLP• OSHA HCS 2012• UN GHS•	
Aspiration Hazard	EU/CLP• OSHA HCS 2012• UN GHS•	
Carcinogenicity	EU/CLP• OSHA HCS 2012• UN GHS•	
Germ Cell Mutagenicity	EU/CLP• OSHA HCS 2012• UN GHS•	
Skin corrosion/Irritation	EU/CLP• OSHA HCS 2012• UN GHS•	
Skin sensitization	EU/CLP• OSHA HCS 2012• UN GHS•	
STOT-RE	EU/CLP• OSHA HCS 2012• UN GHS•	
STOT-SE	EU/CLP• OSHA HCS 2012• UN GHS•	
Toxicity for Reproduction	EU/CLP• OSHA HCS 2012• UN GHS•	
Respiratory sensitization	EU/CLP• OSHA HCS 2012• UN GHS•	
Serious eye damage/Irritation	EU/CLP• OSHA HCS 2012• UN GHS•	

**Medical Conditions Aggravated by Exposure** • No data available.

#### Potential Health Effects

##### Inhalation

**Acute (Immediate)** • May cause irritation.

**Chronic (Delayed)** • No data available.

##### Skin

**Acute (Immediate)** • May cause irritation.

**Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.

##### Eye

**Acute (Immediate)** • May cause irritation.

**Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.

#### Ingestion

Acute (Immediate)

- May cause irritation.

Chronic (Delayed)

- No specific information available.

#### Other

Acute (Immediate)

- May cause irritation.

Mutagenic Effects

- No data available.

Carcinogenic Effects

- No data available.

Reproductive Effects

- No data available.

### Section 12 - Ecological Information

#### 12.1 Toxicity

Component	CAS	Data	Comments
Benzophenone (1% TO 2%)	119-61-9	Crustacea: 24 Hour(s) EC50 Crustacea 28 mg/L ; Fish: 96 Hour(s) LC50 Fish 14.2 mg/L	

#### 12.2 Persistence and degradability

- No data available.

#### 12.3 Bioaccumulative potential

- No data available.

#### 12.4 Mobility in Soil

- No data available.

#### 12.5 Results of PBT and vPvB assessment

- No data available.

#### 12.6 Other adverse effects

Ecological Fate

- No data available.

Potential Environmental Effects

- May cause long lasting harmful effects to aquatic life.

### Section 13 - Disposal Considerations

#### 13.1 Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### 13.2 Other Information

- Dispose of wastes in an approved waste disposal facility. Avoid release to the environment.

### Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	NDA	NDA	NDA	NDA

IMO/IMDG	NDA	NDA	NDA	NDA	NDA
IATA/ICAO	NDA	NDA	NDA	NDA	NDA

#### 14.6 Special precautions for user

• None known.

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

• This product is provided only in non-bulk containers.

#### 14.8 Other information

DOT • Not regulated.

IMO/IMDG • Not regulated.

IATA/ICAO • Not regulated.

### Section 15 - Regulatory Information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • No data available

Inventory						
Component	CAS	Australia AICS	Canada DSL	China	EU EINECS	EU ELNICS
Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes	Yes	Yes	No	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	No
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes	Yes	Yes	No	Yes
Inventory (Con't.)						
Component	CAS	Japan ENCS	Korea KECL	New Zealand	Philippines PICCS	Switzerland SWISS
Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	Yes	Yes	Yes	Yes	No
Benzophenone	119-61-9	Yes	Yes	Yes	Yes	No
1-hydroxycyclohexyl phenyl ketone	947-19-3	Yes	Yes	Yes	Yes	No
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	Yes	Yes	Yes	Yes	Yes
Inventory (Con't.)						
Component	CAS		TSCA			
Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha"-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1		Yes			
Benzophenone	119-61-9		Yes			
1-hydroxycyclohexyl phenyl ketone	947-19-3		Yes			
1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1		Yes			

## Australia

### Labor

#### Australia - List of Designated Hazardous Substances - Classification

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	N R50, R53

## Denmark

### Environment

#### Denmark - Advisory List for Self-Classification of Dangerous Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	R52/53
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	Not Listed

## Europe

### Other

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	N, R50-53

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	N R:50/53 S 60-61

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	S 60-61

#### EU - Endocrine Disruptors (COM (2001)262) - Candidate List of Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Group III Chemical
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	Not Listed

#### EU - Existing Substance Regulation (793/93/EEC) - Evaluation of Existing HPV Chemicals (REPEALED)

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	Not Listed

#### EU - No-Longer Polymers List (67/548/EEC)

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy))	52408-84-1	3% TO 4%	NLP No. 500-114-5 (>1<6.5 mol propoxylated units)
•Benzophenone	119-61-9	1% TO 2%	Not Listed

•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)

119313-12-1 0.3% TO 0.6% Not Listed

## Germany

### Environment

#### Germany - Water Classification (VwVwS) - Annex 3

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	ID Number 2124, not considered hazardous to water
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	ID Number 2024, hazard class 2 - hazard to waters
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	ID Number 2102, hazard class 2 - hazard to waters

## Japan

### Environment

#### Japan - Pollutant Release Transfer Register (PRTR) - Class 1 Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	403 >=1 %
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	Not Listed

#### Inventory - Japan - Industrial Safety and Health Law Substances (ISHL)

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	7-(4)-697
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	10-2655
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	8-(7)-927

### Other

#### Japan - Chemical Substance Control Law (CSCL) - Examined Existing Chemical Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Low-decomposable (see also 4-125); Non-decomposable/Low-concentrate (see also 4-125)
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	Not Listed

## Korea

### Labor

#### Korea - MOE - Harmful Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	92-23

#### Korea - ISHA - Name, Toxicity and Protective Measures of New Chemical Substances

•1-hydroxycyclohexyl phenyl ketone	947-19-3	0.5% TO 1.5%	Not Listed
•Poly(oxy(methyl-1,2-ethanediyl)), alpha, alpha', alpha''-1,2,3-propanetriyltris(omega-((1-oxo-2-propenyl)oxy)	52408-84-1	3% TO 4%	Not Listed
•Benzophenone	119-61-9	1% TO 2%	Not Listed
•1-Butanone, 2-(dimethylamino)-1-(4-(4-morpholinyl)phenyl)-2-(phenylmethyl)	119313-12-1	0.3% TO 0.6%	94-20

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## 15.3 Other Information

- California Proposition 65: This product contains or may contain a substance(s) known to the State of California to cause cancer and/or reproductive toxicity:

Benzophenone	CAS No. 119-61-9	1%
Formaldehyde	CAS No. 50-00-0	<0.001%
1,4-Dioxane	CAS No. 123-91-1	<0.0001%

## Section 16 - Other Information

### Relevant Phrases (code & full text)

- H412 - Harmful to aquatic life with long lasting effects
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P332+P313 - If skin irritation occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- R36 - Irritating to eyes.
- R37 - Irritating to respiratory system.
- R38 - Irritating to skin.
- R50 - Very toxic to aquatic organisms.
- R52 - Harmful to aquatic organisms.
- R53 - May cause long-term adverse effects in the aquatic environment.
- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H412 - Harmful to aquatic life with long lasting effects
- P264 - Wash thoroughly after handling.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P332+P313 - If skin irritation occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P410 - Protect from sunlight.
- P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Classification method for mixtures

- Calculation method. On basis of test data

### Last Revision Date

- 29 August 2012

### Preparation Date

- 01 February 2013

### Other Information

- Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext. 142.

### Disclaimer/Statement of Liability

- The information contained herein is based on data available to us and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under direct supervision, no representation is made that the information is accurate, reliable, complete, or representative and Buyer may rely thereon only at the Buyer's risk. We make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and / or situations involving its handling and uses. No warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.



# SAFETY DATA SHEET

B54LF200

## Section 1. Identification

**Exact name** : MERCURY AIR-O-JET® Enamel  
High Hide TJR Blue

**Product code** : B54LF200

**Other means of identification** : Not available.

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**  
Paint or paint related material.

**Manufacturer** : THE SHERWIN-WILLIAMS COMPANY  
101 W. Prospect Avenue  
Cleveland, OH 44115

**Emergency telephone number of the company** : US / Canada: (216) 566-2917  
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

**Product Information Telephone Number** : US / Canada: (800) 524-5979  
Mexico: Not Available

**Regulatory Information Telephone Number** : US / Canada: (216) 566-2902  
Mexico: Not Available

**Transportation Emergency Telephone Number** : US / Canada: (800) 424-9300  
Mexico: SETIQ 01-800-00-214-00 / (52) 55-5559-1588 24 hours / 365 days a year

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Fertility) - Category 1B  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1  
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 53%  
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 54.8%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 53%

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

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## Section 2. Hazards identification

### Hazard statements

- : Highly flammable liquid and vapor.
- May cause an allergic skin reaction.
- May damage fertility.
- Suspected of damaging the unborn child.
- Suspected of causing cancer.
- May be fatal if swallowed and enters airways.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
- Causes damage to organs through prolonged or repeated exposure.

### Precautionary statements

#### Prevention

- : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

#### Response

- : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

#### Storage

- : Store locked up. Store in a well-ventilated place. Keep cool.

#### Disposal

- : Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Please refer to the SDS for additional information. Keep out of reach of children. Do not transfer contents to other containers for storage.

### Hazards not otherwise classified

- : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

### Substance/mixture

- : Mixture

### Other means of identification

- : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Lt. Aliphatic Hydrocarbon Solvent	≥25 - ≤50	64742-89-8
Mineral Spirits 140-Flash	≥10 - ≤25	64742-88-7
Titanium Dioxide	≤10	13463-67-7
Xylene mixed isomers	≤3	1330-20-7
Vinyl Toluene	≤3	25013-15-4
Zirconium 2-Ethylhexanoate	≤1	22464-99-9
Ethylbenzene	<1	100-41-4
Hydrotreated Heavy Petroleum Naphtha	<1	64742-48-9
Med. Aliphatic Hydrocarbon Solvent	≤0.3	64742-88-7
Cobalt 2-Ethylhexanoate	≤0.3	136-52-7
Methyl Ethyl Ketoxime	≤0.3	96-29-7

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BS4LF200

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### Section 3. Composition/information on ingredients

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

#### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

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## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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## Section 6. Accidental release measures

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Aliphatic Hydrocarbon Solvent neral Spirits 140-Flash	None. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 400 mg/m <sup>3</sup> 8 hours.
Titanium Dioxide	ACGIH TLV (United States, 3/2018). TWA: 10 mg/m <sup>3</sup> 8 hours. OSHA PEL (United States, 5/2018). TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust
Xylene mixed isomers	ACGIH TLV (United States, 3/2018). TWA: 100 ppm 8 hours. TWA: 434 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m <sup>3</sup> 15 minutes. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours.
Vinyl Toluene	ACGIH TLV (United States, 3/2018). TWA: 50 ppm 8 hours. TWA: 242 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 483 mg/m <sup>3</sup> 15 minutes. NIOSH REL (United States, 10/2016). TWA: 100 ppm 10 hours. TWA: 480 mg/m <sup>3</sup> 10 hours. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 480 mg/m <sup>3</sup> 8 hours.
Zirconium 2-Ethylhexanoate	ACGIH TLV (United States, 3/2018). TWA: 5 mg/m <sup>3</sup> , (as Zr) 8 hours. STEL: 10 mg/m <sup>3</sup> , (as Zr) 15 minutes. NIOSH REL (United States, 10/2016). TWA: 5 mg/m <sup>3</sup> , (as Zr) 10 hours. STEL: 10 mg/m <sup>3</sup> , (as Zr) 15 minutes. OSHA PEL (United States, 5/2018). TWA: 5 mg/m <sup>3</sup> , (as Zr) 8 hours.
Thylbenzene	ACGIH TLV (United States, 3/2018). TWA: 20 ppm 8 hours. NIOSH REL (United States, 10/2016). TWA: 100 ppm 10 hours. TWA: 435 mg/m <sup>3</sup> 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m <sup>3</sup> 15 minutes. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours.
Hydrotreated Heavy Petroleum Naphtha Med. Aliphatic Hydrocarbon Solvent	None. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 400 mg/m <sup>3</sup> 8 hours.
Cobalt 2-Ethylhexanoate	ACGIH TLV (United States, 3/2018). TWA: 0.02 mg/m <sup>3</sup> , (as Co) 8 hours.
Methyl Ethyl Ketoxime	AIHA WEEL (United States, 5/2018). Skin sensitizer. TWA: 10 ppm 8 hours.

#### Occupational exposure limits (Canada)

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## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Medium aliphatic solvent naphtha (petroleum) C9-C12	<b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 525 mg/m <sup>3</sup> 8 hours.
Titanium dioxide	<b>CA British Columbia Provincial (Canada, 6/2017).</b> TWA: 3 mg/m <sup>3</sup> 8 hours. Form: Respirable dust
	TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust
	<b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust
	<b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 10 mg/m <sup>3</sup> 8 hours.
	<b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
	<b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 20 mg/m <sup>3</sup> 15 minutes.
	TWA: 10 mg/m <sup>3</sup> 8 hours.
Xylene	<b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 100 ppm 8 hours.
	15 min OEL: 651 mg/m <sup>3</sup> 15 minutes.
	15 min OEL: 150 ppm 15 minutes.
	8 hrs OEL: 434 mg/m <sup>3</sup> 8 hours.
	<b>CA British Columbia Provincial (Canada, 6/2017).</b> TWA: 100 ppm 8 hours.
	STEL: 150 ppm 15 minutes.
	<b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 100 ppm 8 hours.
	TWAEV: 434 mg/m <sup>3</sup> 8 hours.
	STEV: 150 ppm 15 minutes.
	STEV: 651 mg/m <sup>3</sup> 15 minutes.
	<b>CA Ontario Provincial (Canada, 1/2018).</b> STEL: 150 ppm 15 minutes.
	TWA: 100 ppm 8 hours.
	<b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 150 ppm 15 minutes.
	TWA: 100 ppm 8 hours.
m-Toluene	<b>CA Alberta Provincial (Canada, 4/2009).</b> 15 min OEL: 100 ppm 15 minutes.
	8 hrs OEL: 50 ppm 8 hours.
	15 min OEL: 483 mg/m <sup>3</sup> 15 minutes.
	8 hrs OEL: 242 mg/m <sup>3</sup> 8 hours.
	<b>CA British Columbia Provincial (Canada, 6/2017).</b> TWA: 25 ppm 8 hours.
	STEL: 75 ppm 15 minutes.
	<b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 50 ppm 8 hours.
	TWAEV: 242 mg/m <sup>3</sup> 8 hours.
	STEV: 100 ppm 15 minutes.
	STEV: 483 mg/m <sup>3</sup> 15 minutes.
	<b>CA Ontario Provincial (Canada, 1/2018).</b> STEL: 100 ppm 15 minutes.
	TWA: 50 ppm 8 hours.
	<b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 100 ppm 15 minutes.
	TWA: 50 ppm 8 hours.



## Section 8. Exposure controls/personal protection

Zirconium 2-Ethylhexanoate	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 5 mg/m<sup>3</sup>, (as Zr) 8 hours. 15 min OEL: 10 mg/m<sup>3</sup>, (as Zr) 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b> TWA: 5 mg/m<sup>3</sup>, (as Zr) 8 hours. STEL: 10 mg/m<sup>3</sup>, (as Zr) 15 minutes.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b> TWA: 5 mg/m<sup>3</sup>, (as Zr) 8 hours. STEL: 10 mg/m<sup>3</sup>, (as Zr) 15 minutes.</p> <p><b>CA Ontario Provincial (Canada, 1/2018).</b> STEL: 10 mg/m<sup>3</sup>, (as Zr) 15 minutes. TWA: 5 mg/m<sup>3</sup>, (as Zr) 8 hours.</p>
Ethylbenzene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 100 ppm 8 hours. 8 hrs OEL: 434 mg/m<sup>3</sup> 8 hours. 15 min OEL: 543 mg/m<sup>3</sup> 15 minutes. 15 min OEL: 125 ppm 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b> TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 20 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b> TWA: 100 ppm 8 hours. TWA: 434 mg/m<sup>3</sup> 8 hours. STEL: 125 ppm 15 minutes. STEL: 543 mg/m<sup>3</sup> 15 minutes.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours.</p>
Cobalt 2-Ethylhexanoate	<p><b>CA Ontario Provincial (Canada, 1/2018).</b> TWA: 0.02 mg/m<sup>3</sup>, (as Co) 8 hours. Form Inorganic</p> <p><b>CA British Columbia Provincial (Canada, 6/2017).</b> TWA: 0.02 mg/m<sup>3</sup>, (as Co) 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b> Skin sensitizer. TWA: 0.02 mg/m<sup>3</sup>, (as Co) 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 0.06 mg/m<sup>3</sup>, (measured as Co) 15 minutes. TWA: 0.02 mg/m<sup>3</sup>, (measured as Co) 8 hours.</p>
Methyl Ethyl Ketoxime	<p><b>AIHA WEEL (United States, 5/2018).</b> Skin sensitizer. TWA: 10 ppm 8 hours.</p>

### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
Xylene mixed isomers	<p><b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.</p>
Vinyl Toluene	<p><b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 50 ppm 8 hours. STEL: 100 ppm 15 minutes.</p>
Zirconium 2-Ethylhexanoate	<p><b>NOM-010-STPS-2014 (Mexico, 4/2016).</b></p>

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## Section 8. Exposure controls/personal protection

Ethylbenzene	TWA: 5 mg/m <sup>3</sup> , (as Zr) 8 hours. STEL: 10 mg/m <sup>3</sup> , (as Zr) 15 minutes. <b>NOM-010-STPS-2014 (Mexico, 4/2016).</b>
Cobalt 2-Ethylhexanoate	TWA: 20 ppm 8 hours. <b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 0.02 mg/m <sup>3</sup> , (as Co) 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eyeface protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.

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## Section 9. Physical and chemical properties

<b>Melting point/freezing point</b>	: Not available.
<b>Boiling point/boiling range</b>	: 115°C (239°F)
<b>Flash point</b>	: Closed cup: 14°C (57.2°F) [Tagliabue Closed Cup]
<b>Evaporation rate</b>	: 1.5 (butyl acetate = 1)
<b>Volatility (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 0.9% Upper: 11%
<b>Vapor pressure</b>	: 1.6 kPa (12 mm Hg) [at 20°C]
<b>Vapor density</b>	: 3.66 [Air = 1]
<b>Relative density</b>	: 0.96
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
<b>Molecular weight</b>	: Not applicable.
<b>Aerosol product</b>	
<b>Heat of combustion</b>	: 21,348 kJ/g

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene mixed isomers	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Vinyl Toluene	LD50 Oral	Rat	2255 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
Zirconium 2-Ethylhexanoate	LD50 Oral	Rat	>5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Ethylbenzene	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation Vapor	Rat	8500 mg/m <sup>3</sup>	4 hours
Hydrotreated Heavy Petroleum Naphtha	LD50 Oral	Rat	>6 g/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
Cobalt 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-

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Methyl Ethyl Ketoxime	LD50 Oral	Rat	1.22 g/kg	-
	LD50 Oral	Rat	930 mg/kg	-

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Xylene mixed isomers	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Vinyl Toluene	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Mild irritant	Rabbit	-	90 milligrams	-
Ethylbenzene	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
Methyl Ethyl Ketoxime	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Xylene mixed isomers	-	3	-
Vinyl Toluene	-	3	-
Ethylbenzene	-	2B	-
Cobalt 2-Ethylhexanoate	-	2B	Reasonably anticipated to be a human carcinogen.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Mineral Spirits 140-Flash	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene mixed isomers	Category 3	Not applicable.	Respiratory tract irritation
Vinyl Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

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## Section 11. Toxicological information

Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Hydrotreated Heavy Petroleum Naphtha	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Mineral Spirits 140-Flash	Category 1	Not determined	Not determined
Xylene mixed isomers	Category 2	Not determined	Not determined
Vinyl Toluene	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
Hydrotreated Heavy Petroleum Naphtha	Category 2	Not determined	Not determined
Med. Aliphatic Hydrocarbon Solvent	Category 1	Not determined	Not determined

### Aspiration hazard

Name	Result
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Mineral Spirits 140-Flash	ASPIRATION HAZARD - Category 1
Xylene mixed isomers	ASPIRATION HAZARD - Category 1
Vinyl Toluene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
Hydrotreated Heavy Petroleum Naphtha	ASPIRATION HAZARD - Category 1
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**contact** : May cause an allergic skin reaction.

**ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.

**Inhalation** : Adverse symptoms may include the following:  
 respiratory tract irritation  
 coughing  
 nausea or vomiting  
 headache  
 drowsiness/fatigue  
 dizziness/vertigo  
 unconsciousness  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

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- Skin contact** : Adverse symptoms may include the following  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : May damage fertility.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	11618.8 mg/kg
mal	25146.1 mg/kg
ilation (gases)	118832.9 ppm
inhalation (vapors)	288.4 mg/l

## Section 12. Ecological information

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Xylene mixed isomers	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Vinyl Toluene	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 1 to 10 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8.9 mg/l Marine water	Crustaceans - Chaetogammarus marinus - Young	48 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours

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## Section 12. Ecological information

Methyl Ethyl Ketoxime	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene mixed isomers	-	-	Readily
Ethylbenzene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Xylene mixed isomers	-	8.1 to 25.9	low
Vinyl Toluene	-	100 to 320	low
Zirconium 2-Ethylhexanoate	-	2.96	low
Hydrotreated Heavy Petroleum Naphtha	-	10 to 2500	high
Cobalt 2-Ethylhexanoate	-	15600	high
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations







**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

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## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
1 proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT: Marine pollutant (Lt. Aliphatic Hydrocarbon Solvent, Mineral Spirits 140-Flash)
Transport hazard class(es)	3 	3 	3 	3 	3  
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	Yes.
Additional information	-  <u>ERG No.</u> 128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2 18-2.19 (Class 3).  <u>ERG No.</u> 128	-  <u>ERG No.</u> 128	The environmentally hazardous substance mark may appear if required by other transportation regulations.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency schedules</u> F-E, S- E

**Special precautions for user :** Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code :** Not available.

**Proper shipping name :** Not available.  
**Ship type :** Not available.  
**Pollution category :** Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### International regulations

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## Section 15. Regulatory information

### International lists

Australia inventory (AICS): Not determined.  
China inventory (IECSC): Not determined.  
Japan inventory (ENCSC): Not determined.  
Japan inventory (ISHL): Not determined.  
Korea inventory (KECI): Not determined.  
Malaysia inventory (EHS Register): Not determined.  
New Zealand Inventory of Chemicals (NZIoC): Not determined.  
Philippines inventory (PICCS): Not determined.  
Taiwan Chemical Substances Inventory (TCSI): Not determined.  
Thailand inventory: Not determined.  
Turkey inventory: Not determined.  
Vietnam inventory: Not determined.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	3
Flammability	3
Physical hazards	0

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 1B	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

### History

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Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

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## Section 16. Other information

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

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# MATERIAL SAFETY DATA SHEET

F78XXR10852-1434  
00 01

DATE OF PREPARATION  
Jun 5, 2012

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

F78XXR10852-1434

### PRODUCT NAME

Fast Dry Acrylic Enamel, PANTONE 209

### MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY  
101 Prospect Avenue N.W.  
Cleveland, OH 44115

### Telephone Numbers and Websites

Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
5	64742-88-7	Mineral Spirits		
		ACGIH TLV	100 PPM	2 mm
		OSHA PEL	100 PPM	
10	108-88-3	Toluene		22 mm
		ACGIH TLV	20 PPM	
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
6	100-41-4	Ethylbenzene		7.1 mm
		ACGIH TLV	20 PPM	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
36	1330-20-7	Xylene		5.9 mm
		ACGIH TLV	100 PPM	
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
2	108-65-6	1-Methoxy-2-Propanol Acetate		1.8 mm
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
1	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

## SECTION 3 — HAZARDS IDENTIFICATION

### ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

### EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the hematopoietic (blood-forming) system

### HMIS Codes

Health	2*
Flammability	3
Reactivity	0

- the cardiovascular system
- the reproductive system

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

None generally recognized.

**CANCER INFORMATION**

For complete discussion of toxicology data refer to Section 11.

**SECTION 4 — FIRST AID MEASURES**

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and laundry before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**INGESTION:** Do not induce vomiting. Get medical attention immediately.

**SECTION 5 — FIRE FIGHTING MEASURES****FLASH POINT**

62 °F TCC

**LEL**

1.0

**UEL**

13.1

**FLAMMABILITY CLASSIFICATION**

RED LABEL -- Flammable, Flash below 100 °F (38 °C)

**EXTINGUISHING MEDIA**

Carbon Dioxide, Dry Chemical, Foam

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

**SPECIAL FIRE FIGHTING PROCEDURES**

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

**SECTION 6 — ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

**SECTION 7 — HANDLING AND STORAGE****STORAGE CATEGORY**

DOL Storage Class IB

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

**SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION****PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

**VENTILATION**

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

**RESPIRATORY PROTECTION**

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.



When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

**PROTECTIVE GLOVES**

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

**EYE PROTECTION**

Wear safety spectacles with unperforated sideshields.

**OTHER PRECAUTIONS**

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

<b>SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES</b>
---

<b>PRODUCT WEIGHT</b>	7.99 lb/gal	956 g/l
<b>SPECIFIC GRAVITY</b>	0.96	
<b>BOILING POINT</b>	222 - 395 °F	105 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	66%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	N.A.	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
	4.74 lb/gal	569 g/l
	Less Water and Federally Exempt Solvents	
	4.74 lb/gal	569 g/l
	Emitted VOC	

<b>SECTION 10 — STABILITY AND REACTIVITY</b>
--

**STABILITY — Stable****CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

<b>SECTION 11 — TOXICOLOGICAL INFORMATION</b>
---

**CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
64742-88-7	Mineral Spirits	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-88-3	Toluene	LC50 RAT LD50 RAT	4HR	4000 ppm 5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT LD50 RAT	4HR	Not Available 8500 mg/kg
13463-67-7	Titanium Dioxide	LC50 RAT LD50 RAT	4HR	Not Available Not Available

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

**SECTION 14 — TRANSPORT INFORMATION**

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

**US Ground (DOT)**

5 Liters (1.3 Gallons) and Less may be Classed as LTD. QTY. OR ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

**DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities**

Ethyl benzene 1000 lb RQ

Toluene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

**Bulk Containers may be Shipped as (check reportable quantities):**

RQ, UN1263, PAINT, 3, PG II, (XYLENES (ISOMERS AND MIXTURE)).

(ERG#128)

**Canada (TDG)**

UN1263, PAINT, CLASS 3, PG II, (ERG#128)

**IMO**

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, CLASS 3, PG II, (17 C.c.c.), EmS F-E, S-E, ADR (D/E)

**IATA/ICAO**

UN1263, PAINT, 3, PG II

**SECTION 15 — REGULATORY INFORMATION****SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	10	
100-41-4	Ethylbenzene	6	
1330-20-7	Xylene	36	

**CALIFORNIA PROPOSITION 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**TSCA CERTIFICATION**

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**SECTION 16 — OTHER INFORMATION**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



# MATERIAL SAFETY DATA SHEET

F77XXR3123-1407  
00 01

DATE OF PREPARATION  
Dec 16, 2008

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

F77XXR3123-1407

### PRODUCT NAME

Quick Dry Enamel, STELLO RED

### MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY  
101 Prospect Avenue N.W.  
Cleveland, OH 44115

### Telephone Numbers and Websites

Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
9	64742-89-8	V. M. & P. Naphtha		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
16	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 PPM (Skin)	
		OSHA PEL	150 PPM (Skin) STEL	
3	100-41-4	Ethylbenzene		
		ACGIH TLV	100 PPM	7.1 mm
		ACGIH TLV	125 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
15	1330-20-7	Xylene		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
1	95-63-6	1,2,4-Trimethylbenzene		
		ACGIH TLV	25 PPM	2.03 mm
		OSHA PEL	25 PPM	
7	108-65-6	1-Methoxy-2-Propanol Acetate		
		ACGIH TLV	Not Available	1.8 mm
		OSHA PEL	Not Available	
2	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

## SECTION 3 — HAZARDS IDENTIFICATION

### ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

### EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

### HMIS Codes

Health	2*
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death. Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming, cardiovascular and reproductive systems.

#### **SIGNS AND SYMPTOMS OF OVEREXPOSURE**

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

None generally recognized.

#### **CANCER INFORMATION**

For complete discussion of toxicology data refer to Section 11.

### **SECTION 4 — FIRST AID MEASURES**

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**INGESTION:** Do not induce vomiting. Get medical attention immediately.

### **SECTION 5 — FIRE FIGHTING MEASURES**

#### **FLASH POINT**

51° F TCC

#### **LEL**

0.9

#### **UEL**

13.1

#### **FLAMMABILITY CLASSIFICATION**

RED LABEL -- Flammable, Flash below 100° F (38 °C)

#### **EXTINGUISHING MEDIA**

Carbon Dioxide, Dry Chemical, Foam

#### **UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

#### **SPECIAL FIRE FIGHTING PROCEDURES**

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

### **SECTION 6 — ACCIDENTAL RELEASE MEASURES**

#### **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

### **SECTION 7 — HANDLING AND STORAGE**

#### **STORAGE CATEGORY**

DOL Storage Class IB

#### **PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

### **SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

#### **VENTILATION**

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

#### **RESPIRATORY PROTECTION**

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

**PROTECTIVE GLOVES**

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

**EYE PROTECTION**

Wear safety spectacles with unperforated sideshields.

**OTHER PRECAUTIONS**

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

PRODUCT WEIGHT	8.11 lb/gal	971 g/l
SPECIFIC GRAVITY	0.98	
BOILING POINT	222 - 337° F	105 - 169° C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
4.49lb/gal	539g/l	Less Water and Federally Exempt Solvents
4.49lb/gal	539g/l	Emitted VOC

**SECTION 10 — STABILITY AND REACTIVITY****STABILITY — Stable****CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

**SECTION 11 — TOXICOLOGICAL INFORMATION****CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

## TOXICOLOGY DATA

CAS No.	Ingredient Name			
64742-89-8	V. M. & P. Naphtha	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-88-3	Toluene	LC50 RAT LD50 RAT	4HR	4000 ppm 5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available 3500 mg/kg
1330-20-7	Xylene	LC50 RAT LD50 RAT	4HR	5000 ppm 4300 mg/kg
95-63-6	1,2,4-Trimethylbenzene	LC50 RAT LD50 RAT	4HR	Not Available Not Available
108-65-6	1-Methoxy-2-Propanol Acetate	LC50 RAT LD50 RAT	4HR	Not Available 8500 mg/kg
13463-67-7	Titanium Dioxide	LC50 RAT LD50 RAT	4HR	Not Available Not Available

## SECTION 12 — ECOLOGICAL INFORMATION

## ECOTOXICOLOGICAL INFORMATION

No data available.

## SECTION 13 — DISPOSAL CONSIDERATIONS

## WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

## SECTION 14 — TRANSPORT INFORMATION

## US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

## DOT (Dept of Transportation) Hazardous Substances &amp; Reportable Quantities

Toluene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

## Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAINT, 3, PG II, (XYLENES (ISOMERS AND MIXTURE)),

(ERG#128)

## Canada (TDG)

UN1263, PAINT, CLASS 3, PG II, (ERG#128)

## IMO

UN1263, PAINT, CLASS 3, PG II, (11 C c.c.), EmS F-E, S-E

## SECTION 15 — REGULATORY INFORMATION

## SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	16	
100-41-4	Ethylbenzene	3	
1330-20-7	Xylene	15	
95-63-6	1,2,4-Trimethylbenzene	1	

## CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

## SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

# MATERIAL SAFETY DATA SHEET

F78XXW6811-1407  
00 01

DATE OF PREPARATION  
Apr 14, 2009

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

F78XXW6811-1407

### PRODUCT NAME

Fast Dry Acrylic Enamel, stello white 2008

### MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY  
101 Prospect Avenue N.W.  
Cleveland, OH 44115

### Telephone Numbers and Websites

Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
17	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 PPM (Skin)	
		OSHA PEL	150 PPM (Skin) STEL	
5	100-41-4	Ethylbenzene		7.1 mm
		ACGIH TLV	100 PPM	
		ACGIH TLV	125 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
26	1330-20-7	Xylene		5.9 mm
		ACGIH TLV	100 PPM	
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
23	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

## SECTION 3 — HAZARDS IDENTIFICATION

### ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

### EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, cardiovascular and reproductive systems.

### SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

### CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

### HMIS Codes

Health	2*
Flammability	3
Reactivity	0

## SECTION 4 — FIRST AID MEASURES

- EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.
- SKIN:** Wash affected area thoroughly with soap and water.  
Remove contaminated clothing and laundry before re-use.
- INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.
- INGESTION:** Do not induce vomiting. Get medical attention immediately.

## SECTION 5 — FIRE FIGHTING MEASURES

<b>FLASH POINT</b> 53 °F TCC	<b>LEL</b> 1.0	<b>UEL</b> 7.0	<b>FLAMMABILITY CLASSIFICATION</b> RED LABEL -- Flammable, Flash below 100 °F (38 °C)
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### EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

### SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

## SECTION 6 — ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

## SECTION 7 — HANDLING AND STORAGE

### STORAGE CATEGORY

DOL Storage Class IB

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally.

Keep out of the reach of children.

## SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

### PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

### VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits.

Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

### RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

### PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

### EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

### OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.



**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

PRODUCT WEIGHT	9.44 lb/gal	1130 g/l
SPECIFIC GRAVITY	1.14	
BOILING POINT	222 - 292 °F	105 - 144 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
	4.55lb/gal	545g/l
	4.55lb/gal	545g/l
	Less Water and Federally Exempt Solvents	
	Emitted VOC	

**SECTION 10 — STABILITY AND REACTIVITY****STABILITY — Stable****CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

**SECTION 11 — TOXICOLOGICAL INFORMATION****CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
100-41-4	Ethylbenzene	LC50 RAT	4HR	Not Available
		LD50 RAT		3500 mg/kg
1330-20-7	Xylene	LC50 RAT	4HR	5000 ppm
		LD50 RAT		4300 mg/kg
13463-67-7	Titanium Dioxide	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

**SECTION 14 — TRANSPORT INFORMATION****US Ground (DOT)**

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG II, (ERG#128)

**DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities**

Ethyl benzene 1000 lb RQ

Toluene 1000 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

**Bulk Containers may be Shipped as (check reportable quantities):**

RQ, UN1263, PAINT, 3, PG II, (XYLENES (ISOMERS AND MIXTURE)),

(ERG#128)

**Canada (TDG)**

UN1263, PAINT, CLASS 3, PG II, (ERG#128)

**IMO**

UN1263, PAINT, CLASS 3, PG II, (12 C c.c.), EmS F-E, S-E

**SECTION 15 — REGULATORY INFORMATION****SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	17	
100-41-4	Ethylbenzene	5	
1330-20-7	Xylene	26	

**CALIFORNIA PROPOSITION 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**TSCA CERTIFICATION**

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**SECTION 16 — OTHER INFORMATION**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



## Safety Data Sheet

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**Version Number:** 14.01  
**Supersedes Date:** 08/11/15

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Process Color 990-05 Black

#### Product Identification Numbers

42-0016-3984-0, 75-0300-8074-3

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Ink

#### 1.3. Supplier's details

**MANUFACTURER:** 3M  
**DIVISION:** Transportation Safety Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 3.

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 2.

Carcinogenicity: Category 2.

Specific Target Organ Toxicity (single exposure): Category 1.

Specific Target Organ Toxicity (single exposure): Category 3.

Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

##### Signal word

Danger

### Symbols

Flame | Exclamation mark | Health Hazard |

### Pictograms



### Hazard Statements

Flammable liquid and vapor.

Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Suspected of damaging fertility or the unborn child.

Suspected of causing cancer.

Causes damage to organs:

sensory organs |

Causes damage to organs through prolonged or repeated exposure:

nervous system |

May cause damage to organs through prolonged or repeated exposure:

sensory organs |

### Precautionary Statements

#### Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

#### Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

If exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Hazards not otherwise classified**

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Dipropylene glycol methyl ether acetate	88917-22-0	15 - 40
1-Methoxy-2-propyl acetate	108-65-6	10 - 30
Cyclohexanone	108-94-1	10 - 30 Trade Secret *
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Trade Secret*	10 - 30
Xylene	1330-20-7	3 - 7 Trade Secret *
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Trade Secret*	3 - 7
Carbon black	1333-86-4	1 - 5 Trade Secret *
2,4-Dihydroxybenzophenone	131-56-6	0.5 - 1.5 Trade Secret *
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	52829-07-9	0.1 - 1.0 Trade Secret *
Ethylbenzene	100-41-4	0.1 - 1.0 Trade Secret *
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	2386-87-0	< 0.5 Trade Secret *
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	104810-48-2	< 0.4 Trade Secret *
Polymeric benzotriazole	104810-47-1	< 0.4 Trade Secret *
Calcium 2-ethylhexanoate	136-51-6	< 0.2 Trade Secret *
Zinc 2-ethylhexanoate	136-53-8	< 0.2 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**5.2. Special hazards arising from the substance or mixture**

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products**

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion

**5.3. Special protective actions for fire-fighters**

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

**6.3. Methods and material for containment and cleaning up**

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m3(100 ppm)	
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., SKIN
Cyclohexanone	108-94-1	OSHA	TWA:200 mg/m3(50 ppm)	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
Xylene	1330-20-7	OSHA	TWA:435 mg/m3(100 ppm)	
Carbon black	1333-86-4	ACGIH	TWA:(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon black	1333-86-4	OSHA	TWA:3.5 mg/m3	
Dipropylene glycol methyl ether acetate	88917-22-0	Manufacturer determined	TWA:100 ppm;STEL:150 ppm	SKIN

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use explosion-proof ventilation equipment. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not



adequate, use respiratory protection equipment.

## 8.2.2. Personal protective equipment (PPE)

### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Liquid
Odor, Color, Grade:	black, solvent odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	>=281 °F
Flash Point	109 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<=1 [Ref Std: BUOAC=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1 %
Flammable Limits(UEL)	12.75 %
Vapor Pressure	<=6.72 mmHg [@ 68 °F]
Vapor Density	>=3.4 [Ref Std: AIR=1]
Density	0.97 g/ml [@ 20 °C]
Specific Gravity	0.97 [Ref Std: WATER=1]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available

Viscosity	1,300 - 1,500 centipoise
Volatile Organic Compounds	700 - 800 g/l [Details: As Packaged.]
Percent volatile	65 - 80 % weight
VOC Less H2O & Exempt Solvents	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
------------------	------------------

None known.	
-------------	--

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### Inhalation:

May be harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

#### Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:****Single exposure may cause target organ effects:**

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<b>Ingredient</b>	<b>CAS No.</b>	<b>Class Description</b>	<b>Regulation</b>
Carbon black	1333-86-4	Grp. 2B: Possible human carcin.	International Agency for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human carcin.	International Agency for Research on Cancer

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

<b>Name</b>	<b>Route</b>	<b>Species</b>	<b>Value</b>
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 > 794, <3160 mg/kg
Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg

1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.8 mg/l
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Dermal		LD50 estimated to be > 5,000 mg/kg
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
2,4-Dihydroxybenzophenone	Dermal		LD50 estimated to be > 5,000 mg/kg
2,4-Dihydroxybenzophenone	Ingestion	Rat	LD50 8,600 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Dermal	Rat	LD50 > 3,170 mg/kg
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.5 mg/l
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Ingestion	Rat	LD50 3,700 mg/kg
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Dermal	Rabbit	LD50 > 23,400 mg/kg
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Rat	LD50 5,000 mg/kg
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Ingestion	Rat	LD50 > 5,000 mg/kg
Polymeric benzotriazole	Dermal	Rat	LD50 > 2,000 mg/kg
Polymeric benzotriazole	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Polymeric benzotriazole	Ingestion	Rat	LD50 > 5,000 mg/kg
Zinc 2-ethylhexanoate	Dermal		LD50 estimated to be > 5,000 mg/kg
Calcium 2-ethylhexanoate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Calcium 2-ethylhexanoate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.2 mg/l
Calcium 2-ethylhexanoate	Ingestion	Rat	LD50 > 5,000 mg/kg
Zinc 2-ethylhexanoate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Xylene	Rabbit	Mild irritant

Carbon black	Rabbit	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Rabbit	No significant irritation
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Minimal irritation
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Rabbit	No significant irritation
Polymeric benzotriazole	Rabbit	No significant irritation
Calcium 2-ethylhexanoate	Rabbit	No significant irritation
Zinc 2-ethylhexanoate	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Severe irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
Carbon black	Rabbit	No significant irritation
2,4-Dihydroxybenzophenone	Rabbit	Severe irritant
Ethylbenzene	Rabbit	Moderate irritant
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Rabbit	Corrosive
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Mild irritant
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Rabbit	No significant irritation
Polymeric benzotriazole	Rabbit	No significant irritation
Calcium 2-ethylhexanoate	Rabbit	Corrosive
Zinc 2-ethylhexanoate	Rabbit	Severe irritant

**Skin Sensitization**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Ethylbenzene	Human	Not classified
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Human	Not classified
(3',4'-Epoxy-cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Guinea pig	Sensitizing
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Guinea pig	Sensitizing
Polymeric benzotriazole	Guinea pig	Sensitizing

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Xylene	In Vitro	Not mutagenic

Xylene	In vivo	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
(3',4'-Epoxy)cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	In vivo	Not mutagenic
(3',4'-Epoxy)cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Calcium 2-ethylhexanoate	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic
(3',4'-Epoxy)cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate	Dermal	Mouse	Not carcinogenic

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 216 mg/l	during organogenesis
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation

Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 43 mg/l	prematings & during gestation
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Not classified for development	Rat	NOAEL 125 mg/kg/day	during gestation
Calcium 2-ethylhexanoate	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Calcium 2-ethylhexanoate	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Calcium 2-ethylhexanoate	Ingestion	Toxic to development	Rat	NOAEL 100 mg/kg/day	1 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to development	Rat	NOAEL 100 mg/kg/day	1 generation

### Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for effects on or via lactation

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 161 mg/l	6 hours
Cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	



				nl		
Calcium 2-ethylhexanoate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Zinc 2-ethylhexanoate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dipropylene glycol methyl ether acetate	Ingestion	liver   heart   endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Cyclohexanone	Inhalation	liver   kidney and/or bladder	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart   endocrine system   hematopoietic system   muscles   kidney and/or bladder   respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 1.1 mg/l	2 years

			classification			
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
(3',4'-epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	olfactory system	May cause damage to organs through prolonged or repeated exposure	Rat	NOAEL 5 mg/kg/day	90 days
(3',4'-epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	liver   kidney and/or bladder   hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
(3',4'-epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	endocrine system   respiratory system	Not classified	Rat	NOAEL 1,113 mg/kg/day	14 days

**Aspiration Hazard**

Name	Value
Xylene	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical

substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

## SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### 311/312 Hazard Categories:

Fire Hazard - Yes    Pressure Hazard - No    Reactivity Hazard - No    Immediate Hazard - Yes    Delayed Hazard - Yes

#### EPCRA 311/312 Hazard Classifications (effective January 1, 2018):

##### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

##### Health Hazards

Carcinogenicity

Reproductive toxicity

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

#### Ingredient

Xylene

Ethylbenzene

#### C.A.S. No

1330-20-7

100-41-4

#### % by Wt

Trade Secret 3 - 7

Trade Secret 0.1 - 1.0

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SECTION 16: Other information****NFPA Hazard Classification****Health:** 2 **Flammability:** 2 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

**Document Group:** 11-8903-4  
**Issue Date:** 08/18/17**Version Number:** 14.01  
**Supersedes Date:** 08/11/15

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## Safety Data Sheet

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**Document Group:** 11-8900-0  
**Issue Date:** 08/18/17

**Version Number:** 18.01  
**Supersedes Date:** 05/20/16

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Process Color 990-12 Red

#### Product Identification Numbers

LE-N100-0147-1, 42-0016-3988-1, 75-0300-8079-2

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Ink

#### 1.3. Supplier's details

**MANUFACTURER:** 3M  
**DIVISION:** Transportation Safety Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 3.  
Serious Eye Damage/Irritation: Category 2A.  
Skin Corrosion/Irritation: Category 2.  
Skin Sensitizer: Category 1.  
Reproductive Toxicity: Category 2.  
Carcinogenicity: Category 1A.  
Specific Target Organ Toxicity (single exposure): Category 1.  
Specific Target Organ Toxicity (single exposure): Category 3.  
Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

**Signal word**

Danger

**Symbols**

Flame | Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Flammable liquid and vapor.

Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Suspected of damaging fertility or the unborn child.

May cause cancer.

Causes damage to organs:

sensory organs |

Causes damage to organs through prolonged or repeated exposure:

nervous system |

May cause damage to organs through prolonged or repeated exposure:

sensory organs |

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Hazards not otherwise classified**

34% of the mixture consists of ingredients of unknown acute inhalation toxicity.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
1-Methoxy-2-propyl acetate	108-65-6	10 - 30
Cyclohexanone	108-94-1	10 - 30 Trade Secret *
Dipropylene glycol methyl ether acetate	88917-22-0	10 - 30
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Trade Secret*	10 - 30
Xylene	1330-20-7	3 - 7 Trade Secret *
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Trade Secret*	3 - 7
Organic pigment (NJ TSR # 04499600-5232P)	Trade Secret*	1 - 5
2,4-Dihydroxybenzophenone	131-56-6	0.5 - 1.5 Trade Secret *
Bis(2,2,6,6-tetramethyl-4-piperidiny) sebacate	52829-07-9	0.1 - 1.0 Trade Secret *
Ethylbenzene	100-41-4	0.1 - 1.0 Trade Secret *
Nickel salts of naphthenic acids	61788-71-4	0.1 - 1.0 Trade Secret *
2,3-Epoxypropyl neodecanoate	26761-45-5	< 0.5 Trade Secret *
Poly(oxy-1,2-ethanediyl), .alpha.-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-.omega.-hydroxy-	104810-48-2	< 0.4 Trade Secret *
Polymeric benzotriazole	104810-47-1	< 0.4 Trade Secret *
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	106276-80-6	< 0.2
Calcium 2-ethylhexanoate	136-51-6	< 0.2 Trade Secret *
Zinc 2-ethylhexanoate	136-53-8	< 0.2 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

### SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation:**



Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**5.2. Special hazards arising from the substance or mixture**

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products**

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion

**5.3. Special protective actions for fire-fighters**

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

**6.3. Methods and material for containment and cleaning up**

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone,

that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.). Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m3(100 ppm)	
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., SKIN
Cyclohexanone	108-94-1	OSHA	TWA:200 mg/m3(50 ppm)	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
Xylene	1330-20-7	OSHA	TWA:435 mg/m3(100 ppm)	
NICKEL, SOLUBLE COMPOUNDS	61788-71-4	OSHA	TWA(as Ni):1 mg/m3	
Dipropylene glycol methyl ether acetate	88917-22-0	Manufacturer determined	TWA:100 ppm;STEL:150 ppm	SKIN

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

#### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Liquid
Odor, Color, Grade:	red, solvent odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	>=281 °F
Flash Point	109 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<=1 [Ref Std: BUOAC-1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1 %
Flammable Limits(UEL)	12.75 %
Vapor Pressure	<=6.72 mmHg [@ 68 °F]
Vapor Density	>=3.4 [Ref Std: AIR =1]

Density	0.97 g/ml [ @ 20 °C ]
Specific Gravity	0.97 [ Ref Std: WATER=1 ]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	1,300 - 1,500 centipoise
Molecular weight	No Data Available
Volatile Organic Compounds	700 - 800 g/l [ Details: As Packaged. ]
Percent volatile	65 - 80 % weight
VOC Less H2O & Exempt Solvents	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### Inhalation:

May be harmful if inhaled.

**Respiratory Tract Irritation:** Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**

May be harmful in contact with skin.

**Skin Irritation:** Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.  
**Allergic Skin Reaction (non-photo induced):** Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

**Severe Eye Irritation:** Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Ingestion:**

**Gastrointestinal Irritation:** Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**

**Auditory Effects:** Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

**Central Nervous System (CNS) Depression:** Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**

**Auditory Effects:** Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Prolonged or repeated exposure by ingestion may cause:

**Neurological Effects:** Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<b><u>Ingredient</u></b>	<b><u>CAS No.</u></b>	<b><u>Class Description</u></b>	<b><u>Regulation</u></b>
NI CMPDS NOT ALLOYS	61788-71-4	Known human carcinogen	National Toxicology Program Carcinogens
NICKEL COMPOUNDS	61788-71-4	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

<b><u>Name</u></b>	<b><u>Route</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
Overall product	Dermal		No data available; calculated ATE <sub>2,000</sub> - 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE <sub>20</sub> - 50 mg/l
Overall product	Ingestion		No data available; calculated AT <sub>50</sub> >5,000 mg/kg
Cyclohexanone	Dermal	Rabbit	LD <sub>50</sub> >794, <3160 mg/kg

Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.8 mg/l
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Dermal		LD50 estimated to be > 5,000 mg/kg
Alkyd resin 3261 (NJ TSR # 04499600-6267P)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Organic pigment (NJ TSR # 04499600-5232P)	Dermal		LD50 estimated to be > 5,000 mg/kg
Organic pigment (NJ TSR # 04499600-5232P)	Inhalation-Dust/Mist		LC50 estimated to be > 12.5 mg/l
Organic pigment (NJ TSR # 04499600-5232P)	Ingestion		LD50 estimated to be > 5,000 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
2,4-Dihydroxybenzophenone	Dermal		LD50 estimated to be > 5,000 mg/kg
2,4-Dihydroxybenzophenone	Ingestion	Rat	LD50 8,600 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Dermal	Rat	LD50 > 3,170 mg/kg
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.5 mg/l
Bis(2,2,6,6-tetramethyl-4-piperidiny)l sebacate	Ingestion	Rat	LD50 3,700 mg/kg
Nickel salts of naphthenic acids	Ingestion		LD50 estimated to be 50 - 300 mg/kg
2,3-Epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-Epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Dermal	Rat	LD50 > 2,000 mg/kg
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Ingestion	Rat	LD50 > 5,000 mg/kg
Polymeric benzotriazole	Dermal	Rat	LD50 > 2,000 mg/kg
Polymeric benzotriazole	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.8 mg/l
Polymeric benzotriazole	Ingestion	Rat	LD50 > 5,000 mg/kg
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1 mg/l
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Ingestion	Rat	LD50 > 5,000 mg/kg

Zinc 2-ethylhexanoate	Dermal		LD50 estimated to be > 5,000 mg/kg
Calcium 2-ethylhexanoate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Calcium 2-ethylhexanoate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.2 mg/l
Calcium 2-ethylhexanoate	Ingestion	Rat	LD50 > 5,000 mg/kg
Zinc 2-ethylhexanoate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Cyclohexanone	Rabbit	Irritant
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
Organic pigment (NJ TSP # 04499600-5232P)	Professional judgement	No significant irritation
Xylene	Rabbit	Mild irritant
2,4-Dihydroxybenzophenone	Rabbit	No significant irritation
Ethylbenzene	Rabbit	Mild irritant
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Rabbit	No significant irritation
Nickel salts of naphthenic acids	Professional judgement	Minimal irritation
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Rabbit	No significant irritation
Polymetric benzotriazole	Rabbit	No significant irritation
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Rabbit	No significant irritation
Calcium 2-ethylhexanoate	Rabbit	No significant irritation
Zinc 2-ethylhexanoate	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Cyclohexanone	Rabbit	Severe irritant
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
Organic pigment (NJ TSP # 04499600-5232P)	Professional judgement	No significant irritation
Xylene	Rabbit	Mild irritant
2,4-Dihydroxybenzophenone	Rabbit	Severe irritant
Ethylbenzene	Rabbit	Moderate irritant
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Rabbit	Corrosive
Nickel salts of naphthenic acids	Professional judgement	Mild irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-	Rabbit	No significant irritation



dimethylethyl-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-		
Polymeric benzotriazole	Rabbit	No significant irritation
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Rabbit	No significant irritation
Calcium 2-ethylhexanoate	Rabbit	Corrosive
Zinc 2-ethylhexanoate	Rabbit	Severe irritant

**Skin Sensitization**

Name	Species	Value
Cyclohexanone	Guinea pig	Not classified
Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Ethylbenzene	Human	Not classified
Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate	Human	Not classified
Nickel salts of naphthenic acids	similar compounds	Sensitizing
2,3-Epoxypropyl neodecanoate	Guinea pig	Sensitizing
Poly(oxy-1,2-ethanediyl), alpha-[3-[3-(2H-benzotriazol-2-yl)-5-(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]-omega-hydroxy-	Guinea pig	Sensitizing
Polymeric benzotriazole	Guinea pig	Sensitizing
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	Human	Not classified

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In vivo	Mutagenic
Benzoic acid, 2,3,4,5-tetrachloro-6-cyano-, methyl ester, reaction products with p-phenylenediamine and sodium methoxide	In Vitro	Not mutagenic
Calcium 2-ethylhexanoate	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification

Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic
Nickel salts of naphthemic acids	Not Specified	similar compounds	Carcinogenic

## Reproductive Toxicity

### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	prematuring & during gestation
Calcium 2-ethylhexanoate	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Calcium 2-ethylhexanoate	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Calcium 2-ethylhexanoate	Ingestion	Toxic to development	Rat	NOAEL 100 mg/kg/day	1 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to female reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	1 generation
Zinc 2-ethylhexanoate	Ingestion	Toxic to development	Rat	NOAEL 100 mg/kg/day	1 generation

## Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for effects on or via lactation

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 16.1 mg/l	6 hours
Cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
Calcium 2-ethylhexanoate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
Zinc 2-ethylhexanoate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Cyclohexanone	Inhalation	liver   kidney and/or bladder	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
Dipropylene glycol methyl ether acetate	Ingestion	liver   heart   endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days

1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart   endocrine system   hematopoietic system   muscles   kidney and/or bladder   respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
2,3-Epoxypropyl neodecanoate	Ingestion	hematopoietic system   liver	Not classified	Rat	NOAEL 400 mg/kg/day	5 weeks
2,3-Epoxypropyl neodecanoate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 40 mg/kg/day	5 weeks

**Aspiration Hazard**

Name	Value
Xylene	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information

on this material and/or its components.

## SECTION 12: Ecological information

### Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

### Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

## SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

### 311/312 Hazard Categories:

Fire Hazard - Yes    Pressure Hazard - No    Reactivity Hazard - No    Immediate Hazard - Yes    Delayed Hazard - Yes

### EPCRA 311/312 Hazard Classifications (effective January 1, 2018):

#### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

#### Health Hazards

Carcinogenicity

Reproductive toxicity

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Xylene	1330-20-7	Trade Secret 3 - 7
Ethylbenzene	100-41-4	Trade Secret 0.1 - 1.0
Nickel salts of naphthenic acids (NICKEL COMPOUNDS)	61788-71-4	0.1 - 1.0

#### 15.2. State Regulations

Contact 3M for more information.

#### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

#### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### SECTION 16: Other information

#### NFPA Hazard Classification

Health: 2 Flammability: 2 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ 991 Thinner/Retarder

#### Product Identification Numbers

42-0018-2917-7, 75-0300-7301-1

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Thinner/retarder for screen printing inks

#### 1.3. Supplier's details

**MANUFACTURER:** 3M  
**DIVISION:** Transportation Safety Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 4.

Serious Eye Damage/Irritation: Category 2A.

Specific Target Organ Toxicity (single exposure): Category 3.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

##### Pictograms



**Hazard Statements**

Combustible liquid.

Causes serious eye irritation.

May cause drowsiness or dizziness.

**Precautionary Statements****Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep cool.

Keep container tightly closed.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Diethylene glycol monoethyl ether acetate	112-15-2	40 - 70 Trade Secret *
Dipropylene glycol methyl ether acetate	88917-22-0	40 - 70

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**

Wash with soap and water. If you feel unwell, get medical attention.

**Eye Contact:**

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1. Information on toxicological effects.

**4.3. Indication of any immediate medical attention and special treatment required**

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**5.2. Special hazards arising from the substance or mixture**

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

**6.3. Methods and material for containment and cleaning up**

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a closed container approved for transportation by appropriate authorities. Clean up

residue with detergent and water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial or professional use only. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

##### Skin/hand protection

No chemical protective gloves are required.

##### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:

Liquid

Specific Physical Form:	Liquid
Odor, Color, Grade:	clear, solvent odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	> -408 °F
Flash Point	186 °F [ <i>Test Method: Tagliabue Closed Cup</i> ]
Evaporation rate	≤1 [ <i>Ref Std: BUOAC=1</i> ]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.0 %
Flammable Limits(UEL)	19.4 %
Vapor Pressure	≤1.55 mmHg [ <i>@ 20 °C</i> ]
Vapor Density	≤6.1 [ <i>Ref Std: AIR=1</i> ]
Density	0.98 g/ml
Specific Gravity	0.98 [ <i>Ref Std: WATER=1</i> ]
Solubility In Water	Approximately 69.4 g/100 g
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	1 - 100 centipoise
Molecular weight	<i>No Data Available</i>
Volatile Organic Compounds	<i>No Data Available</i>
Percent volatile	100 % weight
VOC Less H2O & Exempt Solvents	<i>Not Applicable</i>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

#### Substance

None known.

#### Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient

classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

#### 11.1. Information on Toxicological effects

##### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

##### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

##### Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

##### Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

##### Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

##### Additional Health Effects:

##### Single exposure may cause target organ effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

##### Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

##### Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
Diethylene glycol monoethyl ether acetate	Dermal	Rabbit	LD50 15,000 mg/kg
Diethylene glycol monoethyl ether acetate	Ingestion	Rat	LD50 11,000 mg/kg

ATE = acute toxicity estimate

##### Skin Corrosion/Irritation

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
Diethylene glycol monoethyl ether acetate	Human and	Minimal irritation

	animal	
--	--------	--

**Serious Eye Damage/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
Diethylene glycol monoethyl ether acetate	Rabbit	Severe irritant

**Skin Sensitization**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
Diethylene glycol monoethyl ether acetate	Human and animal	Not classified

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
Diethylene glycol monoethyl ether acetate	In Vitro	Not mutagenic

**Carcinogenicity**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Diethylene glycol monoethyl ether acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL. Not available	not applicable
Diethylene glycol monoethyl ether acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL. Not available	not applicable

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dipropylene glycol methyl ether acetate	Ingestion	liver   heart   endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
Diethylene glycol monoethyl ether acetate	Inhalation	respiratory system   liver, immune system   kidney and/or bladder	Not classified	Rat	NOAEL 0.48 mg/l	2 weeks

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

## SECTION 12: Ecological information

### Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

### Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

## SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### EPCRA 311/312 Hazard Classifications:

##### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

##### Health Hazards

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Diethylene glycol monoethyl ether acetate (GLYCOL ETHERS)	112-15-2	40 - 70



**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SECTION 16: Other information****NFPA Hazard Classification**

**Health:** 2 **Flammability:** 2 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Flow Additive 892

#### Product Identification Numbers

75-0301-0620-9

#### 1.2. Recommended use and restrictions on use

##### Recommended use

FLOW ADDITIVE FOR SCREEN PRINTING INKS USED ON REFLECTIVE SHEETINGS

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Transportation Safety Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Reproductive Toxicity: Category 2.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Health Hazard |

##### Pictograms

**Hazard Statements**

Suspected of damaging fertility or the unborn child.

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves.

**Response:**

If exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**SECTION 3: Composition/information on ingredients**

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>% by Wt</b>
Siloxanes and silicone, di-me, hydroxy-terminated	70131-67-8	60 - 100
Poly(dimethylsiloxane)	63148-62-9	30 - 60
Dimethyl siloxane, reaction product with silica	67762-90-7	3 - 7
Octamethylcyclotetrasiloxane	556-67-2	0 - 2 Trade Secret *

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation:**

Remove person to fresh air. If you are concerned, get medical advice.

**Skin Contact:**

Wash with soap and water. If you are concerned, get medical advice.

**Eye Contact:**

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**

Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

See Section 11.1. Information on toxicological effects.

#### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

#### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

#### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Formaldehyde	During Combustion
Carbon dioxide	During Combustion

#### 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

#### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

#### 6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

#### 7.2. Conditions for safe storage including any incompatibilities

Store away from oxidizing agents.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

**Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Octamethylcyclotetrasiloxane	556-67-2	AIHA	TWA:10 ppm	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

**8.2. Exposure controls****8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

**8.2.2. Personal protective equipment (PPE)****Eye/face protection**

None required.

**Skin/hand protection**

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Nitrile Rubber

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

For questions about suitability for a specific application, consult with your respirator manufacturer.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>General Physical Form:</b>	Liquid
<b>Specific Physical Form:</b>	liquid
<b>Odor, Color, Grade:</b>	milky white colored liquid with a sweet solvent odor
<b>Odor threshold</b>	No Data Available
<b>pH</b>	Not Applicable
<b>Melting point</b>	Not Applicable
<b>Boiling Point</b>	>=95 °F
<b>Flash Point</b>	>=214 °F [Test Method:Closed Cup]

Evaporation rate	No Data Available
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	0.984 g/ml
Specific Gravity	0.984 [ @ 25 °C ]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	1,000 centipoise
Molecular weight	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong oxidizing agents

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**

May cause additional health effects (see below).

**Skin Contact:**

Contact with the skin during product use is not expected to result in significant irritation.

**Eye Contact:**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:****Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available, calculated ATE >5,000 mg/kg
Siloxanes and silicone, di-me, hydroxy-terminated	Dermal	Rabbit	LD50 > 16,000 mg/kg
Siloxanes and silicone, di-me, hydroxy-terminated	Ingestion	Rat	LD50 > 64,000 mg/kg
Poly(dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
Dimethyl siloxane, reaction product with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl siloxane, reaction product with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl siloxane, reaction product with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Octamethylcyclotetrasiloxane	Dermal	Rat	LD50 > 2,400 mg/kg
Octamethylcyclotetrasiloxane	Inhalation-Dust/Mist (4 hours)	Rat	LC50: 36 mg/l
Octamethylcyclotetrasiloxane	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Poly(dimethylsiloxane)	Rabbit	No significant irritation
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation
Octamethylcyclotetrasiloxane	Rabbit	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Poly(dimethylsiloxane)	Rabbit	No significant irritation
Dimethyl siloxane, reaction product with silica	Rabbit	No significant irritation
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

**Skin Sensitization**



Name	Species	Value
Dimethyl siloxane, reaction product with silica	Human and animal	Not classified
Octamethylcyclotetrasiloxane	Human and animal	Not classified

### Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

### Germ Cell Mutagenicity

Name	Route	Value
Siloxanes and silicone, di-me, hydroxy-terminated	In Vitro	Not mutagenic
Dimethyl siloxane, reaction product with silica	In Vitro	Not mutagenic
Octamethylcyclotetrasiloxane	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
Dimethyl siloxane, reaction product with silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Dimethyl siloxane, reaction product with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl siloxane, reaction product with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Ingestion	Toxic to female reproduction	Rabbit	NOAEL 50 mg/kg/day	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Toxic to female reproduction	Rat	NOAEL 3.6 mg/l	2 generation

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

For the component/components, either no data are currently available or the data are not sufficient for classification.

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dimethyl siloxane, reaction product with silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Octamethylcyclotetrasiloxane	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 960 mg/kg/day	3 weeks
Octamethylcyclotetrasiloxane	Inhalation	liver	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Inhalation	endocrine system   immune system   kidney and/or bladder	Not classified	Rat	NOAEL 8.5 mg/l	2 generation

Octamethylcyclotetrasiloxane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL: 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Ingestion	liver	Not classified	Rat	NOAEL: 1,600 mg/kg/day	2 weeks

**Aspiration Hazard**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information****15.1. US Federal Regulations**

Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:****Physical Hazards**

Not applicable

**Health Hazards**

Reproductive toxicity

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
Octamethylcyclotetrasiloxane	556-67-2	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

#### 15.2. State Regulations

Contact 3M for more information.

#### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

#### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### SECTION 16: Other information

#### NFPA Hazard Classification

Health: 0 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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## Safety Data Sheet

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**Document Group:** 18-3702-0  
**Issue Date:** 01/14/19

**Version Number:** 13.03  
**Supersedes Date:** 08/18/17

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Process Color 885I Black

#### Product Identification Numbers

ID Number                      UPC  
42-0019-9656-2

ID Number                      UPC  
75-0301-1089-6

7000004861

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Ink

#### 1.3. Supplier's details

**MANUFACTURER:** 3M  
**DIVISION:** Transportation Safety Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 3.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 2.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Health Hazard |

**Pictograms****Hazard Statements**

Flammable liquid and vapor.

May damage fertility or the unborn child.

Suspected of causing cancer.

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Wear protective gloves and eye/face protection.

**Response:**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

43% of the mixture consists of ingredients of unknown acute inhalation toxicity.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Dipropylene glycol methyl ether acetate	88917-22-0	30 - 60
Acrylic polymers	Trade Secret*	10 - 30
1-Methoxy-2-propyl acetate	108-65-6	7 - 13
Cyclohexanone	108-94-1	7 - 9 Trade Secret *
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Trade Secret*	3 - 7
Carbon black	1333-86-4	1 - 5 Trade Secret *
Xylene	1330-20-7	< 0.9 Trade Secret *
(3',4'-Epoxycyclohexylmethyl) 3,4-	2386-87-0	< 0.5 Trade Secret *

epoxycyclohexanecarboxylate		
N-Butyl Methacrylate	97-88-1	< 0.3 Trade Secret *
Ethylbenzene	100-41-4	< 0.2 Trade Secret *
Toluene	108-88-3	< 0.2 Trade Secret *

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

#### Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

#### Eye Contact:

No need for first aid is anticipated.

#### If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion

### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. **Warning!** A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

**6.3. Methods and material for containment and cleaning up**

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

**7.2. Conditions for safe storage including any incompatibilities**

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m3(100 ppm)	
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., SKIN



Cyclohexanone	108-94-1	OSHA	TWA:200 mg/m3(50 ppm)	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
Xylene	1330-20-7	OSHA	TWA:435 mg/m3(100 ppm)	
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon black	1333-86-4	OSHA	TWA:3.5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CELL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

None required.

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

#### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Liquid
Odor, Color, Grade:	black, sweet ether-like odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	>=284 °F
Flash Point	108 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<=0.4 [Ref Std: BUOAC=1]

Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.1 % volume
Flammable Limits(UEL)	8.6 % volume
Vapor Pressure	<=3.7 mmHg [ @ 20 °C]
Vapor Density	No Data Available
Density	0.95 g/ml
Specific Gravity	0.95 [Ref Std: WATER=1]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	1,000 - 1,200 centipoise [Details:DTM-300 (#3 @ 30 rpm)]
Volatile Organic Compounds	600 - 800 g/l [Details:As Packaged.]
Percent volatile	65.00 - 75.00 %
VOC Less H2O & Exempt Solvents	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong acids

Strong oxidizing agents

### 10.6. Hazardous decomposition products

#### Substance

None known.

#### Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**Eye Contact:**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:**

**Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE: >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE: >50 mg/l
Overall product	Ingestion		No data available; calculated ATE: >5,000 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.8 mg/l
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 > 794, <3160 mg/kg
Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg

		system   respiratory system		animal species	mg/l	
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months

**Aspiration Hazard**

Name	Value
Xylene	Aspiration hazard
Toluene	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information****15.1. US Federal Regulations**

Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:****Physical Hazards**

Flammable (gases, aerosols, liquids, or solids)

**Health Hazards**

Carcinogenicity

Reproductive toxicity

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

**Ingredient**

Ethylbenzene

**C.A.S. No**

100-41-4

**% by Wt**

Trade Secret &lt; 0.2

**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SECTION 16: Other information****NFPA Hazard Classification****Health:** 1 **Flammability:** 2 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Process Color 8881 Green

#### Product Identification Numbers

42-0019-9659-6, 75-0301-1092-0

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Ink

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Transportation Safety Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 3.

Skin Sensitizer: Category 1.

Reproductive Toxicity: Category 1B.

Carcinogenicity: Category 2.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Flame | Exclamation mark | Health Hazard |

##### Pictograms

**Hazard Statements**

Flammable liquid and vapor.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

Suspected of causing cancer.

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves and eye/face protection.

Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

7% of the mixture consists of ingredients of unknown acute oral toxicity.

7% of the mixture consists of ingredients of unknown acute dermal toxicity.

53% of the mixture consists of ingredients of unknown acute inhalation toxicity.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Dipropylene glycol methyl ether acetate	88917-22-0	30 - 50
Acrylic polymers	Trade Secret*	10 - 30
1-Methoxy-2-propyl acetate	108-65-6	7 - 13
Cyclohexanone	108-94-1	< 10 Trade Secret *



Pigment green	Trade Secret*	< 10
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Trade Secret*	< 10
2,3-Epoxypropyl neodecanoate	26761-45-5	< 0.3 Trade Secret *
n-Butyl methacrylate	97-88-1	< 0.3 Trade Secret *
Dibutyltin dilaurate	77-58-7	< 0.2 Trade Secret *
Ethylbenzene	100-41-4	< 0.2 Trade Secret *
Toluene	108-88-3	< 0.2 Trade Secret *

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

#### Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

#### Eye Contact:

No need for first aid is anticipated.

#### If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

#### Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion

### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure

demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

### 6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m3(100 ppm)	
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	

Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Dermal	Rabbit	LD50 > 23,400 mg/kg
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	Rat	LD50 5,000 mg/kg
N-Butyl Methacrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
N-Butyl Methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 ~ 27 mg/l
N-Butyl Methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
Carbon black	Rabbit	No significant irritation
Xylene	Rabbit	Mild irritant
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Minimal irritation
N-Butyl Methacrylate	Rabbit	Irritant
Toluene	Rabbit	Irritant
Ethylbenzene	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Cyclohexanone	Rabbit	Severe irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
Carbon black	Rabbit	No significant irritation
Xylene	Rabbit	Mild irritant
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Rabbit	Mild irritant
N-Butyl Methacrylate	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Ethylbenzene	Rabbit	Moderate irritant

**Skin Sensitization**

Name	Species	Value
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Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Guinea pig	Sensitizing
N-Butyl Methacrylate	Guinea pig	Sensitizing
Toluene	Guinea pig	Not classified
Ethylbenzene	Human	Not classified

### Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

### Germ Cell Mutagenicity

Name	Route	Value
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	In vivo	Not mutagenic
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	In Vitro	Some positive data exist, but the data are not sufficient for classification
N-Butyl Methacrylate	In Vitro	Not mutagenic
N-Butyl Methacrylate	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
(3',4'-Epoxy cyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Dermal	Mouse	Not carcinogenic
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple	Carcinogenic

animal  
species**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
1-Methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
(3,4-Epoxyoctahydro-2H-pyran-2-yl)methyl 3,4-epoxyoctahydro-2H-pyran-2-carboxylate	Ingestion	Not classified for development	Rat	NOAEL 125 mg/kg/day	during gestation
N-Butyl Methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
N-Butyl Methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	prematuring & during gestation
N-Butyl Methacrylate	Ingestion	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during gestation
N-Butyl Methacrylate	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during gestation
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	prematuring & during gestation

**Lactation**

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for effects on or via lactation

## Target Organ(s)

## Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL. Not available	
Cyclohexanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 16.1 mg/l	6 hours
Cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL. Not available	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL. Not available	
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL. Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL. Not available	
Xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL. Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL. Not available	
Xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
N-Butyl Methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL. Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL. Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL. Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL. Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL. Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL. Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL. Not available	

## Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dipropylene glycol methyl ether acetate	Ingestion	liver   heart   endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62	9 days

acetate					mg/l	
1-Methoxy-2-propyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Cyclohexanone	Inhalation	liver   kidney and/or bladder	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart   endocrine system   gastrointestinal tract   hematopoietic system   muscles   kidney and/or bladder   respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	olfactory system	May cause damage to organs through prolonged or repeated exposure	Rat	NOAEL 5 mg/kg/day	90 days
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	liver   kidney and/or bladder   hematopoietic system	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
(3',4'-Epoxycyclohexylmethyl) 3,4-epoxycyclohexanecarboxylate	Ingestion	endocrine system   respiratory system	Not classified	Rat	NOAEL 1,113 mg/kg/day	14 days
N-Butyl Methacrylate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 11 mg/l	28 days
N-Butyl Methacrylate	Inhalation	olfactory system	Not classified	Rat	NOAEL 1.8 mg/l	28 days
N-Butyl Methacrylate	Inhalation	heart   endocrine system	Not classified	Rat	NOAEL 11 mg/l	28 days



		hematopoietic system   liver   nervous system   respiratory system				
N-Butyl Methacrylate	Ingestion	olfactory system	Not classified	Rat	NOAEL 60 mg/kg/day	90 days
N-Butyl Methacrylate	Ingestion	endocrine system   hematopoietic system   liver   nervous system   kidney and/or bladder   heart   immune system	Not classified	Rat	NOAEL 360 mg/kg/day	90 days
Toluene	Inhalation	auditory system   nervous system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL. Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart   liver   kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL. Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system   vascular system	Not classified	Human	NOAEL. Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver   kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune	Not classified	Multiple	NOAEL 3.3	2 years

Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Cyclohexanone	108-94-1	OSHA	TWA:200 mg/m3(50 ppm)	
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., SKIN
TIN, ORGANIC COMPOUNDS	77-58-7	OSHA	TWA(as Sn):0.1 mg/m3	
TIN, ORGANIC COMPOUNDS	77-58-7	ACGIH	TWA(as Sn):0.1 mg/m3;STEL(as Sn):0.2 mg/m3	SKIN, A4: Not class. as human carcin

ACGIH : American Conference of Governmental Industrial Hygienists

AIIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA : Time-Weighted-Average

STEL : Short Term Exposure Limit

CEIL : Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

None required.

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

#### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form: Liquid

Specific Physical Form: Liquid

Odor, Color, Grade:	green, sweet ether-like odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	>=284 °F
Flash Point	108 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<=0.4 [Ref Std: BUOAC-1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.1 % volume
Flammable Limits(UEL)	8.6 % volume
Vapor Pressure	<=3.7 mmHg [ @ 20 °C]
Vapor Density	No Data Available
Density	0.95 g/ml
Specific Gravity	0.95 [Ref Std: WATER - 1]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	1,000 - 1,200 centipoise [Details: DTM-300 (#3 @ 30 rpm)]
Volatile Organic Compounds	600 - 800 g/l [Details: As Packaged]
Percent volatile	65.00 - 75.00 %
VOC Less H2O & Exempt Solvents	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong acids

Strong oxidizing agents

### 10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be

reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

#### 11.1. Information on Toxicological effects

##### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

##### Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

##### Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

##### Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

##### Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

##### Additional Health Effects:

##### Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

##### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

##### Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

##### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapor (4	Rat	LC50 > 28.8 mg/l

	hours)		
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 >794, <3160 mg/kg
Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg
2,3-Epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-Epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 mg/kg
n-Butyl methacrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
n-Butyl methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 27 mg/l
n-Butyl methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	i.C50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
Dibutyltin dilaurate	Dermal	Rat	LD50 > 2,000 mg/kg
Dibutyltin dilaurate	Ingestion	Rat	LD50 1,290 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
n-Butyl methacrylate	Rabbit	Irritant
Toluene	Rabbit	Irritant
Ethylbenzene	Rabbit	Mild irritant
Dibutyltin dilaurate	Rabbit	Corrosive

**Serious Eye Damage/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Cyclohexanone	Rabbit	Severe irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professional judgement	No significant irritation
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
n-Butyl methacrylate	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Ethylbenzene	Rabbit	Moderate irritant
Dibutyltin dilaurate	Rabbit	Corrosive

**Skin Sensitization**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
2,3-Epoxypropyl neodecanoate	Guinea pig	Sensitizing
n-Butyl methacrylate	Guinea pig	Sensitizing
Toluene	Guinea pig	Not classified
Ethylbenzene	Human	Not classified
Dibutyltin dilaurate	Guinea pig	Sensitizing

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In vivo	Mutagenic
n-Butyl methacrylate	In Vitro	Not mutagenic
n-Butyl methacrylate	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dibutyltin dilaurate	In vivo	Some positive data exist, but the data are not sufficient for classification

**Carcinogenicity**

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
------	-------	-------	---------	-------------	-------------------

1-Methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
n-Butyl methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
n-Butyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	premating & during gestation
n-Butyl methacrylate	Ingestion	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during gestation
n-Butyl methacrylate	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during gestation
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	premating & during gestation
Dibutyltin dilaurate	Ingestion	Toxic to female reproduction	Rat	NOAEL 2 mg/kg/day	premating into lactation
Dibutyltin dilaurate	Ingestion	Toxic to development	Rat	NOAEL 2.5 mg/kg/day	during gestation

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Cyclohexanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 16.1 mg/l	6 hours
Cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
n-Butyl methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
Toluene	Inhalation	central nervous	May cause drowsiness or	Human	NOAEL Not	



		system depression	dizziness		available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

## Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dipropylene glycol methyl ether acetate	Ingestion	liver   heart   endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	olfactory system	Not classified	Mouse	NOAEL 1.62 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Cyclohexanone	Inhalation	liver   kidney and/or bladder	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
2,3-Epoxypropyl neodecanoate	Ingestion	hematopoietic system   liver	Not classified	Rat	NOAEL 400 mg/kg/day	5 weeks
2,3-Epoxypropyl neodecanoate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 40 mg/kg/day	5 weeks
n-Butyl methacrylate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 11 mg/l	28 days
n-Butyl methacrylate	Inhalation	olfactory system	Not classified	Rat	NOAEL 1.8 mg/l	28 days
n-Butyl methacrylate	Inhalation	heart   endocrine system   hematopoietic system   liver   nervous system   respiratory system	Not classified	Rat	NOAEL 11 mg/l	28 days
n-Butyl methacrylate	Ingestion	olfactory system	Not classified	Rat	NOAEL 60 mg/kg/day	90 days
n-Butyl methacrylate	Ingestion	endocrine system   hematopoietic system   liver   nervous system   kidney and/or bladder   heart   immune system	Not classified	Rat	NOAEL 360 mg/kg/day	90 days
Toluene	Inhalation	auditory system   nervous system   eyes   olfactory	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse

		system				
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart   liver   kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system   vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver   kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
Dibutyltin dilaurate	Ingestion	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 2 mg/kg/day	2 weeks
Dibutyltin dilaurate	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 mg/kg/day	28 days

**Aspiration Hazard**

Name	Value
Toluene	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information

on this material and/or its components.

## SECTION 12: Ecological information

### Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

### Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

## SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### EPCRA 311/312 Hazard Classifications:

##### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

##### Health Hazards

Carcinogenicity

Reproductive toxicity

Respiratory or Skin Sensitization

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

**Ingredient**  
Ethylbenzene

**C.A.S. No**  
100-41-4

**% by Wt**  
Trade Secret < 0.2

### 15.2. State Regulations

Contact 3M for more information.

#### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

#### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### SECTION 16: Other information

#### NFPA Hazard Classification

Health: 2 Flammability: 2 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Process Color 8821 Red

#### Product Identification Numbers

ID Number	UPC	ID Number	UPC
42-0019-9653-9		75-0301-1086-2	
75-0301-1818-8			

7000004858, 7010293260

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Ink

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Transportation Safety Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Flammable Liquid: Category 3.  
Skin Sensitizer: Category 1.  
Reproductive Toxicity: Category 1B.  
Carcinogenicity: Category 1A.

#### 2.2. Label elements

##### Signal word

Danger

**Symbols**

Flame | Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Flammable liquid and vapor.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

May cause cancer.

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves.

Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

Store in a well-ventilated place. Keep cool.

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

32% of the mixture consists of ingredients of unknown acute oral toxicity.

32% of the mixture consists of ingredients of unknown acute dermal toxicity.

80% of the mixture consists of ingredients of unknown acute inhalation toxicity.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Dipropylene glycol methyl ether acetate	88917-22-0	30 - 60

Acrylic polymers	Trade Secret*	15 - 40
1-Methoxy-2-propyl acetate	108-65-6	3 - 7
Cyclohexanone	108-94-1	3 - 7 Trade Secret *
Organic pigment (NJ TSR # 04499600-5245P)	Trade Secret*	1 - 5
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Trade Secret*	1 - 5
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidiny1)-2,5-pyrrolidinedione	79720-19-7	0.1 - 1 Trade Secret *
Naphthenic Acid	1338-24-5	< 0.4 Trade Secret *
n-Butyl methacrylate	97-88-1	< 0.4 Trade Secret *
2,3-Epoxypropyl neodecanoate	26761-45-5	< 0.3 Trade Secret *
Ethylbenzene	100-41-4	< 0.3 Trade Secret *
Toluene	108-88-3	< 0.3 Trade Secret *
Nickel salts of naphthenic acids	61788-71-4	< 0.2 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

#### Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

#### Eye Contact:

No need for first aid is anticipated.

#### If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

### Hazardous Decomposition or By-Products

#### Substance

Hydrocarbons

#### Condition

During Combustion



Carbon monoxide  
Carbon dioxide  
Hydrogen Chloride

During Combustion  
During Combustion  
During Combustion

### 5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

### 6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Protect from sunlight. Store away from heat. Store away from acids. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal carcin.
Ethylbenzene	100-41-4	OSHA	TWA:435 mg/m3(100 ppm)	
1-Methoxy-2-propyl acetate	108-65-6	AIHA	TWA:50 ppm	
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
Cyclohexanone	108-94-1	ACGIH	TWA:20 ppm;STEL:50 ppm	A3: Confirmed animal carcin., SKIN
Cyclohexanone	108-94-1	OSHA	TWA:200 mg/m3(50 ppm)	
NICKEL, SOLUBLE COMPOUNDS	61788-71-4	OSHA	TWA(as Ni):1 mg/m3	

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment. Provide appropriate local exhaust when product is heated.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

None required.

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

#### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Liquid
Odor, Color, Grade:	red, sweet ether-like odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	>= 284 °F
Flash Point	108 °F [Test Method: Tagliabue Closed Cup]
Evaporation rate	<= 0.4 [Ref Std: BUOAC-1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.1 % volume
Flammable Limits(UEL)	8.6 % volume
Vapor Pressure	<= 3.7 mmHg [ @ 20 °C]
Vapor Density	No Data Available
Density	0.95 g/ml
Specific Gravity	0.95 [Ref Std: WATER=1]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	1,000 - 1,200 centipoise [Details: DTM - 300 (#3 @ 30 rpm)]
Molecular weight	No Data Available
Volatile Organic Compounds	600 - 800 g/l [Details: As packaged.]
Percent volatile	65.00 - 75.00 %
VOC Less H2O & Exempt Solvents	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Sparks and/or flames

### 10.5. Incompatible materials

Strong acids

Strong oxidizing agents

### 10.6. Hazardous decomposition products

**Substance**

None known.

**Condition**

Refer to section 5.2 for hazardous decomposition products during combustion.

**SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1. Information on Toxicological effects****Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**

May be harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

May cause additional health effects (see below).

**Eye Contact:**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion:**

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:****Reproductive/Developmental Toxicity:**

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
NI CMPDS NOT ALLOYS	61788-71-4	Known human carcinogen	National Toxicology Program Carcinogens
NICKEL COMPOUNDS	61788-71-4	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or

the data are not sufficient for classification.

#### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation-Vapor (4 hr)		No data available; calculated ATE20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Dipropylene glycol methyl ether acetate	Dermal	Rat	LD50 > 2,000 mg/kg
Dipropylene glycol methyl ether acetate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Dipropylene glycol methyl ether acetate	Ingestion	Rat	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
1-Methoxy-2-propyl acetate	Inhalation-Vapor (4 hours)	Rat	LC50 > 28.3 mg/l
1-Methoxy-2-propyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
Cyclohexanone	Dermal	Rabbit	LD50 >794, <3160 mg/kg
Cyclohexanone	Inhalation-Vapor (4 hours)	Rat	LC50 > 6.2 mg/l
Cyclohexanone	Ingestion	Rat	LD50 1,296 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Dermal	Rabbit	LD50 > 8,000 mg/kg
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Ingestion	Rat	LD50 > 8,000 mg/kg
Organic pigment (NJ TSR # 04499600-5245P)	Dermal		LD50 estimated to be > 5,000 mg/kg
Organic pigment (NJ TSR # 04499600-5245P)	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	Dermal	Rabbit	LD50 > 2,000 mg/kg
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 mg/l
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	Ingestion	Rat	LD50 > 2,000 mg/kg
n-Butyl methacrylate	Dermal	Rabbit	LD50 > 2,000 mg/kg
n-Butyl methacrylate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 27 mg/l
n-Butyl methacrylate	Ingestion	Rat	LD50 > 2,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15,433 mg/kg
Ethylbenzene	Inhalation-Vapor (4 hours)	Rat	LC50 17.4 mg/l
Ethylbenzene	Ingestion	Rat	LD50 4,769 mg/kg
2,3-Epoxypropyl neodecanoate	Dermal	Rat	LD50 > 2,000 mg/kg
2,3-Epoxypropyl neodecanoate	Ingestion	Rat	LD50 > 2,000 mg/kg
Nickel salts of naphthenic acids	Ingestion		LD50 estimated to be 50 - 300 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	No significant irritation
Cyclohexanone	Rabbit	Irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professio	No significant irritation

	nal judgeme nt	
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	Rabbit	Corrosive
n-Butyl methacrylate	Rabbit	Irritant
Toluene	Rabbit	Irritant
Ethylbenzene	Rabbit	Mild irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
Nickel salts of naphthenic acids	Professio nal judgeme nt	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Rabbit	No significant irritation
1-Methoxy-2-propyl acetate	Rabbit	Mild irritant
Cyclohexanone	Rabbit	Severe irritant
Vinyl polymer (New Jersey Trade Secret Registry # 04499600-5238P)	Professio nal judgeme nt	No significant irritation
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	Rabbit	Corrosive
n-Butyl methacrylate	Rabbit	Mild irritant
Toluene	Rabbit	Moderate irritant
Ethylbenzene	Rabbit	Moderate irritant
2,3-Epoxypropyl neodecanoate	Rabbit	No significant irritation
Nickel salts of naphthenic acids	Professio nal judgeme nt	Mild irritant

**Skin Sensitization**

Name	Species	Value
Dipropylene glycol methyl ether acetate	Guinea pig	Not classified
1-Methoxy-2-propyl acetate	Guinea pig	Not classified
Cyclohexanone	Guinea pig	Not classified
n-Butyl methacrylate	Guinea pig	Sensitizing
Toluene	Guinea pig	Not classified
Ethylbenzene	Human	Not classified
2,3-Epoxypropyl neodecanoate	Guinea pig	Sensitizing
Nickel salts of naphthenic acids	similar compound s	Sensitizing

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

Name	Route	Value
Dipropylene glycol methyl ether acetate	In Vitro	Not mutagenic
Dipropylene glycol methyl ether acetate	In vivo	Not mutagenic
1-Methoxy-2-propyl acetate	In Vitro	Not mutagenic
Cyclohexanone	In vivo	Not mutagenic
Cyclohexanone	In Vitro	Some positive data exist, but the data are not sufficient for classification

3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	In Vitro	Not mutagenic
n-Butyl methacrylate	In Vitro	Not mutagenic
n-Butyl methacrylate	In vivo	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,3-Epoxypropyl neodecanoate	In vivo	Mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Cyclohexanone	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Ethylbenzene	Inhalation	Multiple animal species	Carcinogenic
Nickel salts of naphthenic acids	Not Specified	similar compounds	Carcinogenic

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
1-Methoxy-2-propyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
1-Methoxy-2-propyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Cyclohexanone	Inhalation	Not classified for female reproduction	Rat	NOAEL 4 mg/l	2 generation
Cyclohexanone	Inhalation	Not classified for male reproduction	Rat	NOAEL 2 mg/l	2 generation
Cyclohexanone	Ingestion	Not classified for development	Mouse	LOAEL 1,100 mg/kg/day	during organogenesis
Cyclohexanone	Inhalation	Not classified for development	Rat	NOAEL 2 mg/l	2 generation
n-Butyl methacrylate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
n-Butyl methacrylate	Ingestion	Not classified for female reproduction	Rat	NOAEL 300 mg/kg/day	prematuring & during gestation
n-Butyl methacrylate	Ingestion	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during gestation
n-Butyl methacrylate	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during gestation



Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4.3 mg/l	prematuring & during gestation

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
1-Methoxy-2-propyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Cyclohexanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Guinea pig	LOAEL 16.1 mg/l	6 hours
Cyclohexanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Cyclohexanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	
3-Dodecyl-1-(2,2,6,6-tetramethyl-4-piperidinyl)-2,5-pyrrolidinedione	Inhalation	respiratory irritation	May cause respiratory irritation	similar health hazards	NOAEL Not available	
n-Butyl methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professional judgement	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Dipropylene glycol methyl ether acetate	Ingestion	liver   heart   endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	4 weeks
1-Methoxy-2-propyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
1-Methoxy-2-propyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
1-Methoxy-2-propyl	Inhalation	blood	Not classified	Multiple	NOAEL 16.2	9 days

acetate				animal species	mg/l	
1-Methoxy-2-propyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Cyclohexanone	Inhalation	liver   kidney and/or bladder	Not classified	Rabbit	NOAEL 0.76 mg/l	50 days
Cyclohexanone	Ingestion	liver	Not classified	Mouse	NOAEL 4,800 mg/kg/day	90 days
n-Butyl methacrylate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 11 mg/l	28 days
n-Butyl methacrylate	Inhalation	olfactory system	Not classified	Rat	NOAEL 1.8 mg/l	28 days
n-Butyl methacrylate	Inhalation	heart   endocrine system   hematopoietic system   liver   nervous system   respiratory system	Not classified	Rat	NOAEL 11 mg/l	28 days
n-Butyl methacrylate	Ingestion	olfactory system	Not classified	Rat	NOAEL 60 mg/kg/day	90 days
n-Butyl methacrylate	Ingestion	endocrine system   hematopoietic system   liver   nervous system   kidney and/or bladder   heart   immune system	Not classified	Rat	NOAEL 360 mg/kg/day	90 days
Toluene	Inhalation	auditory system   nervous system   eyes   olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart   liver   kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system   vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver   kidney and/or bladder	Not classified	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 1.1 mg/l	2 years

			classification			
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3.4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2.4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3.3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4.2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	Not classified	Multiple animal species	NOAEL 3.3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
2,3-Epoxypropyl neodecanoate	Ingestion	hematopoietic system   liver	Not classified	Rat	NOAEL 400 mg/kg/day	5 weeks
2,3-Epoxypropyl neodecanoate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 40 mg/kg/day	5 weeks

**Aspiration Hazard**

Name	Value
Toluene	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information****Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations****13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### EPCRA 311/312 Hazard Classifications:

##### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

##### Health Hazards

Carcinogenicity

Reproductive toxicity

Respiratory or Skin Sensitization

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Ethylbenzene	100-41-4	Trade Secret < 0.3
Nickel salts of naphthemic acids (NICKEL COMPOUNDS)	61788-71-4	< 0.2

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## SECTION 16: Other information

#### NFPA Hazard Classification

Health: 2 Flammability: 2 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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## SAFETY DATA SHEET

### 1. Identification

**Product identifier** S-0211  
**Other means of identification**  
**Product code** 0300658  
**Recommended use** Solvent  
**Recommended restrictions** None known.  
**Manufacturer** Superior Oil Company, Inc.  
1402 North Capitol Avenue, Suite #100  
Indianapolis, IN 46202  
US  
Information (317) 781-4400  
Emergency (317) 781-4400

### 2. Hazard(s) identification

**Physical hazards** Flammable liquids Category 2  
**Health hazards** Not classified.  
**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 2  
Hazardous to the aquatic environment, long-term hazard Category 2  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word**

DANGER!

**Hazard statement**

H225 Highly flammable liquid and vapor.  
H401 Toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

**Prevention**

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 - Keep container tightly closed.  
P240 - Ground/bond container and receiving equipment.  
P241 - Use explosion-proof electrical/ventilating/lighting equipment.  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/eye protection/face protection.

**Response**

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P370 + P378 - In case of fire: Use appropriate media to extinguish.  
P391 - Collect spillage.

**Storage**

P403 + P235 - Store in a well-ventilated place. Keep cool.

**Disposal**

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Toluene		108-88-3	80-100
2-Butanone		78-93-3	10-30

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

Inhalation	If overexposure to vapors or mist, move to fresh air. Call a physician if breathing becomes difficult.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

Suitable extinguishing media	Water fog, Foam, Carbon dioxide (CO <sub>2</sub> ). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor.

#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.



## 7. Handling and storage

### Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

### Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Avoid spark promoters. Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
2-Butanone (CAS 78-93-3)	PEL	590 mg/m <sup>3</sup> 200 ppm

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butanone (CAS 78-93-3)	STEL	300 ppm
	TWA	200 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butanone (CAS 78-93-3)	STEL	885 mg/m <sup>3</sup> 300 ppm
	TWA	590 mg/m <sup>3</sup> 200 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m <sup>3</sup> 150 ppm
	TWA	375 mg/m <sup>3</sup> 100 ppm

### Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-Butanone (CAS 78-93-3)	2 mg/l	MEK	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

\* - For sampling details, please see the source document.

#### Exposure guidelines

##### US - California OELs: Skin designation

Toluene (CAS 108-88-3)

Can be absorbed through the skin.

##### US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3)

Skin designation applies.

#### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear safety glasses with side shields (or goggles).

##### Hand protection

Wear protective gloves.

##### Skin protection

##### Other

Wear appropriate chemical resistant clothing.

##### Respiratory protection

Avoid breathing dust/fume/gas/mist/vapors/spray. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

#### General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	Typical Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	175.28 °F (79.6 °C) approx.
Flash point	24.8 °F (-4.0 °C) Lowest Flashing component
Evaporation rate	> 1 (Butyl Acetate = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	45.57 hPa (1 hPa = 0.75006 mmHg)
Vapor pressure temp.	@ 20 Deg. C
Vapor density	> 1 (Air = 1)
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Miscible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Flash point class	Flammable IB
Percent volatile	100 %
Pounds per gallon	7.17 lb/gal
Specific gravity	0.86

VOC (Weight %) 100 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizers and strong acids. Ammonia. Amines. Isocyanates. Caustics.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known if stored and applied as directed.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

<b>Acute toxicity</b>	Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
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Components	Species	Test Results
2-Butanone (CAS 78-93-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 8000 mg/kg
<i>Inhalation</i>		
LC50	Mouse	11000 ppm, 45 Minutes
	Rat	11700 ppm, 4 Hours
<i>Oral</i>		
LD50	Mouse	670 mg/kg
	Rat	2300 - 3500 mg/kg
<i>Other</i>		
LD50	Mouse	1660 g/kg, 24 Hours
	Rat	12290 mg/kg, 24 Hours
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	12124 mg/kg 14.1 ml/kg
<i>Inhalation</i>		
LC50	Mouse	5320 mg/l, 8 Hours 400 mg/l, 24 Hours
	Rat	26700 mg/l, 1 Hours 12200 mg/l, 2 Hours 8000 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	2.6 g/kg
<i>Other</i>		
LD50	Mouse	59 mg/kg

Components	Species	Test Results
	Rat	1332 mg/kg
* Estimates for product may be based on additional component data not shown.		
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not available.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged inhalation may be harmful.	

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components	Species	Test Results
2-Butanone (CAS 78-93-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus) > 400 mg/l, 96 hours
Toluene (CAS 108-88-3)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch) 8.11 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Partition coefficient n-octanol / water (log Kow)**

2-Butanone	0.29
	0.3

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

Waste from residues /  
unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

#### 14. Transport information

##### DOT BULK

UN number	1263
Proper shipping name	Paint Related Material
Hazard class	3
Packing group	II
Reportable quantity	1235
ERG code	128

##### DOT NON-BULK

UN number	1263
Proper shipping name	Paint Related Material
Hazard class	3
Packing group	II
Reportable quantity	1235
ERG code	128

#### 15. Regulatory information

##### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

##### CERCLA Hazardous Substance List (40 CFR 302.4)

2-Butanone (CAS 78-93-3)	Listed.
Toluene (CAS 108-88-3)	Listed.

##### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

##### Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No

##### SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Yes

##### Hazardous chemical

##### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Toluene	108-88-3	80-100

##### Other federal regulations

##### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Toluene (CAS 108-88-3)

##### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

##### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))

2-Butanone (CAS 78-93-3)  
Toluene (CAS 108-88-3)

##### DEA Essential Chemical Code Number

2-Butanone (CAS 78-93-3)	6714
Toluene (CAS 108-88-3)	6594

##### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

2-Butanone (CAS 78-93-3)	35 %WV
Toluene (CAS 108-88-3)	35 %WV

**DEA Exempt Chemical Mixtures Code Number**

2-Butanone (CAS 78-93-3) 6714  
Toluene (CAS 108-88-3) 594

**US state regulations****US. Massachusetts RTK - Substance List**

2-Butanone (CAS 78-93-3)  
Toluene (CAS 108-88-3)

**US. New Jersey Worker and Community Right-to-Know Act**

Toluene (CAS 108-88-3) 500 LBS

**US. Pennsylvania RTK - Hazardous Substances**

2-Butanone (CAS 78-93-3)  
Toluene (CAS 108-88-3)

**US. Rhode Island RTK**

2-Butanone (CAS 78-93-3)  
Toluene (CAS 108-88-3)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Toluene (CAS 108-88-3) Listed: January 1, 1991

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

Toluene (CAS 108-88-3) Listed: August 7, 2009

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 02-20-2015

**Version #** 01

**Disclaimer** This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.

**Revision Information** Physical & Chemical Properties: Multiple Properties  
Transport Information: Material Transportation Information  
Regulatory Information: United States



## SAFETY DATA SHEET

### 1. Identification

**Product identifier** Methyl Ethyl Ketone \*

**Other means of identification**

**Product code** 0120009

**CAS number** 78-93-3

**Recommended use** Solvent

**Recommended restrictions** None known.

**Manufacturer information** Superior Oil Company, Inc.  
1402 North Capitol Avenue, Suite #100  
Indianapolis, IN 46202 US  
(317) 781-4400  
(317) 781-4400

### 2. Hazard(s) identification

**Physical hazards** Flammable liquids Category 2

**Health hazards** Acute toxicity, oral Category 4

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Specific target organ toxicity, single exposure Category 3 narcotic effects

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger

#### Hazard statement

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

#### Precautionary statement

##### Prevention

P262	Do not get in eyes, on skin, or on clothing.
P261	Avoid breathing vapors or mist.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.



#### Response

P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P311	Call a POISON CENTER or doctor/physician.
P303 + P361 + P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.

#### Storage

P235	Keep cool.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

#### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
2-Butanone		78-93-3	100

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.

**Large Spills:** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

**Small Spills:** Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

### Environmental precautions

## 7. Handling and storage

### Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
2-Butanone (CAS 78-93-3)	PEL	590 mg/m <sup>3</sup>
		200 ppm

#### US. ACGIH Threshold Limit Values

Material	Type	Value
2-Butanone (CAS 78-93-3)	STEL	300 ppm
	TWA	200 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
2-Butanone (CAS 78-93-3)	STEL	885 mg/m <sup>3</sup>
		300 ppm
	TWA	590 mg/m <sup>3</sup>
		200 ppm

#### Biological limit values

##### ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
2-Butanone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

\* - For sampling details, please see the source document.

#### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

#### Individual protection measures, such as personal protective equipment

Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

#### General hygiene considerations

When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Color	Colorless.
Odor	Ketones.
pH	Not determined
Melting point/freezing point	Not determined
Initial boiling point and boiling range	174.2 °F (79 °C)
Flash point	21.2 °F (-6.0 °C) Closed Cup (ASTM D-56)
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1 % estimated
Flammability limit - upper (%)	11 % estimated
Vapor pressure	75 mm Hg @ 20°C
Vapor density	> 1 (Air = 1)
Solubility(ies)	
Solubility (water)	Appreciable.
Auto-ignition temperature	759.2 °F (404 °C) (ASTM E659)
Other information	
Pounds per gallon	6.75 lb/gal
Specific gravity	0.810
VOC	100 %

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical stability	Material is stable under normal conditions. Stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

Material name: Methyl Ethyl Ketone \*

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Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

### Information on toxicological effects

**Acute toxicity** In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness and central nervous system effects. Harmful if swallowed.

Product	Species	Test Results
2-Butanone (CAS 78-93-3)		
<b>Acute Dermal LD50</b>	Rabbit	> 8000 mg/kg

**Skin corrosion/irritation** Causes skin irritation.  
**Serious eye damage/eye irritation** Causes serious eye irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.  
**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

### Reproductive toxicity

**Specific target organ toxicity - single exposure** This product is not expected to cause reproductive or developmental effects.  
May cause respiratory irritation. May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species		Test Results
2-Butanone (CAS 78-93-3)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	4025 - 6440 mg/l, 48 hours
Fish	LC50	Sheepshead minnow ( <i>Cyprinodon variegatus</i> )	> 400 mg/l, 96 hours
<b>Persistence and degradability</b> No data is available on the degradability of this substance.			
<b>Bioaccumulative potential</b>			
<b>Partition coefficient n-octanol / water (log Kow)</b>			
0.29			
0.3			
<b>Mobility in soil</b>		No data available.	
<b>Other adverse effects</b>		No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
<b>13. Disposal considerations</b>			
<b>Disposal instructions</b>		Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Local disposal regulations</b>		Dispose in accordance with all applicable regulations.	
<b>Hazardous waste code</b>		D001: Waste Flammable material with a flash point < 140 F D035: Waste Methyl ethyl ketone The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
<b>US RCRA Hazardous Waste U List: Reference</b>			
2-Butanone (CAS 78-93-3)		U159	
<b>Waste from residues / unused products</b>		Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
<b>Contaminated packaging</b>		Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
<b>14. Transport information</b>			
<b>DOT BULK / NON-BULK:</b>			
<b>UN number</b>		1193	
<b>Proper shipping name</b>		Ethyl Methyl Ketone	
<b>Hazard class</b>		3	
<b>Packing group</b>		II	
<b>ERG code</b>		127	
<b>15. Regulatory information</b>			
<b>US federal regulations</b>		This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.	
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>			
Not regulated.			
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>			
2-Butanone (CAS 78-93-3)		Listed.	
<b>SARA 304 Emergency release notification</b>			
Not regulated.			
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>			
Not regulated.			
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>			
<b>SARA 302 Extremely hazardous substance</b>			
Not listed.			

**SARA 311/312**  
**Hazardous chemical**  
**Classified hazard**  
**categories**

Yes

Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Specific target organ toxicity (single or repeated exposure)

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)**

Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

2-Butanone (CAS 78-93-3) 6714

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

2-Butanone (CAS 78-93-3) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

2-Butanone (CAS 78-93-3) 6714

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

2-Butanone (CAS 78-93-3) Low priority

**US state regulations**

**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

2-Butanone (CAS 78-93-3)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date 12-05-2014

Revision date 03-20-2019

Version # 03

**Disclaimer** Superior Oil Company, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.

**Revision information** This document has undergone significant changes and should be reviewed in its entirety.





## SAFETY DATA SHEET

### 1. Identification

Product identifier Xylene  
Other means of identification  
Product code 0100006  
Recommended use Solvent  
Recommended restrictions None known.  
Manufacturer information Superior Oil Company, Inc.  
1402 North Capitol Avenue, Suite #100  
Indianapolis, IN 46202 US  
(317) 781-4400  
(317) 781-4400

### 2. Hazard(s) identification

Physical hazards Flammable liquids Category 3  
Health hazards Acute toxicity, dermal Category 4  
Acute toxicity, inhalation Category 4  
Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2  
Carcinogenicity Category 2  
Reproductive toxicity (the unborn child) Category 2  
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation  
Specific target organ toxicity, single exposure Category 3 narcotic effects  
Specific target organ toxicity, repeated exposure Category 2  
Aspiration hazard Category 1  
Environmental hazards Not classified.  
OSHA defined hazards Not classified.  
Label elements



#### Signal word

Danger

#### Hazard statement

H226 Flammable liquid and vapor.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure

#### Precautionary statement

##### Prevention

P262 Do not get in eyes, on skin, or on clothing.  
P261 Avoid breathing vapors or mist.

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

P301 + P310	If swallowed: Immediately call a poison center/doctor.
P331	Do NOT induce vomiting.
P303 + P361 + P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.

#### Storage

P235	Keep cool.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

#### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Xylene (Mixed Isomers)		1330-20-7	> 80
Ethyl Benzene		100-41-4	< 20
Toluene		108-88-3	0-0.5
Cumene		98-82-8	< 0.2

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

## General information

Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog, Foam, Dry chemical powder, Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Flammable liquid and vapor.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cumene (CAS 98-82-8)	PEL	245 mg/m <sup>3</sup>
		50 ppm
Ethyl Benzene (CAS 100-41-4)	PEL	435 mg/m <sup>3</sup>
		100 ppm
Xylene (Mixed Isomers) (CAS 1330-20-7)	PEL	435 mg/m <sup>3</sup>
		100 ppm

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Cumene (CAS 98-82-8)	TWA	50 ppm
Ethyl Benzene (CAS 100-41-4)	TWA	20 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (Mixed Isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Cumene (CAS 98-82-8)	TWA	245 mg/m <sup>3</sup>
		50 ppm
Ethyl Benzene (CAS 100-41-4)	STEL	545 mg/m <sup>3</sup>
		125 ppm
		435 mg/m <sup>3</sup>
Toluene (CAS 108-88-3)	STEL	100 ppm
		560 mg/m <sup>3</sup>
		150 ppm
Xylene (Mixed Isomers) (CAS 1330-20-7)	TWA	375 mg/m <sup>3</sup>
		100 ppm
		655 mg/m <sup>3</sup>
	STEL	150 ppm
		435 mg/m <sup>3</sup>
		100 ppm

**Biological limit values**

ACGIH Biological Exposure Indices Components		Value	Determinant	Specimen	Sampling Time
Ethyl Benzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*	
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*	
	0.03 mg/l	Toluene	Urine	*	
	0.02 mg/l	Toluene	Blood	*	
Xylene (Mixed Isomers) (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*	

\* - For sampling details, please see the source document.

**Exposure guidelines****US - California OELs: Skin designation**

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

Cumene (CAS 98-82-8)	Skin designation applies.
Toluene (CAS 108-88-3)	Skin designation applies.

**US - Tennessee OELs: Skin designation**

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
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**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

Cumene (CAS 98-82-8)	Can be absorbed through the skin
----------------------	----------------------------------

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
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**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge and full facepiece.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

<b>Appearance</b>	Clear.
<b>Physical state</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Aromatic Hydrocarbon.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-54.4 °F (-48 °C)
<b>Initial boiling point and boiling range</b>	280.4 °F (138 °C)
<b>Flash point</b>	80.6 °F (27.0 °C) Closed Cup

Material name: Xylene

0100006 Version #: 03 Revision date: 02-12-2019 Issue date: 04-26-2016

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**Upper/lower flammability or explosive limits**

Flammability limit - lower 1 % estimated (%)

Flammability limit - upper 7 % estimated (%)

Vapor pressure 6.82 mmHg @ 20 Deg. C

Vapor density > 1 (Air = 1)

**Solubility(ies)**

Solubility (water) Negligible

Auto-ignition temperature 809.6 °F (432 °C)

**Other information**

Pounds per gallon 7.25 lb/gal

Specific gravity 0.87

VOC 100 %

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions. Stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.

**Incompatible materials** Strong acids. Strong oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

**Inhalation** Harmful if inhaled. May cause drowsiness and dizziness. Headache. Nausea, vomiting

**Skin contact** Harmful in contact with skin. Causes skin irritation.

**Eye contact** Causes serious eye irritation.

**Ingestion** Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics** Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

**Information on toxicological effects**

**Acute toxicity** May be fatal if swallowed and enters airways. Harmful if inhaled. Harmful in contact with skin

Components	Species	Test Results
Cumene (CAS 98-82-8)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	24.7 mg/l, 2 Hours
<b>Oral</b>		
LD50	Rat	1400 mg/kg
Ethyl Benzene (CAS 100-41-4)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	17800 mg/kg

Components	Species	Test Results
<b>Oral</b>		
LD50	Rat	3500 mg/kg
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	12120 mg/kg 14.1 ml/kg
<b>Inhalation</b>		
LC50	Mouse	5320 ppm, 8 Hours 400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours 12200 ppm, 2 Hours 8000 ppm, 4 Hours
<b>Oral</b>		
LD50	Rat	2.6 g/kg
Xylene (Mixed Isomers) (CAS 1330-20-7)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 43 g/kg
<b>Inhalation</b>		
LC50	Rat	6350 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	3523 - 8600 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Suspected of causing cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Cumene (CAS 98-82-8)	2B Possibly carcinogenic to humans.	
Ethyl Benzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.	
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.	
Xylene (Mixed Isomers) (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>		
Not regulated.		
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>		
Cumene (CAS 98-82-8)	Reasonably Anticipated to be a Human Carcinogen.	
<b>Reproductive toxicity</b>	Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. Suspected of damaging the unborn child.	
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation. May cause drowsiness and dizziness.	
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.	
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.	
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	



## 12. Ecological information

### Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Cumene (CAS 98-82-8)			
Aquatic			
Crustacea	EC50	Brine shrimp ( <i>Artemia</i> sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout ( <i>Oncorhynchus mykiss</i> )	2.7 mg/l, 96 hours
Ethyl Benzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	7.5 - 11 mg/l, 96 hours
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon ( <i>Oncorhynchus kisutch</i> )	8.11 mg/l, 96 hours
Xylene (Mixed Isomers) (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	7.711 - 9.591 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

### Bioaccumulative potential

#### Partition coefficient n-octanol / water (log Kow)

Cumene	3.66
Ethyl Benzene	3.15
Toluene	2.73
Xylene (Mixed Isomers)	3.12
	3.12 - 3.2

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D001: Waste Flammable material with a flash point <140 F D018: Waste Benzene The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT NON-BULK

UN number	1307
Proper shipping name	Xylenes
Hazard class	3

Packing group III  
ERG code 130

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Cumene (CAS 98-82-8)	Listed.
Ethyl Benzene (CAS 100-41-4)	Listed.
Toluene (CAS 108-88-3)	Listed.
Xylene (Mixed Isomers) (CAS 1330-20-7)	Listed.

### SARA 304 Emergency release notification

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312** Yes

#### Hazardous chemical

<b>Classified hazard categories</b>	Flammable (gases, aerosols, liquids, or solids) Acute toxicity (any route of exposure) Skin corrosion or irritation Serious eye damage or eye irritation Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Aspiration hazard
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### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethyl Benzene	100-41-4	< 20
Xylene (Mixed Isomers)	1330-20-7	> 80

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Cumene (CAS 98-82-8)  
Ethyl Benzene (CAS 100-41-4)  
Toluene (CAS 108-88-3)  
Xylene (Mixed Isomers) (CAS 1330-20-7)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3) 6594

#### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35 %WV

#### DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3) 594

### US state regulations

#### California Proposition 65



**WARNING:** This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Cumene (CAS 98-82-8)

Listed: April 6, 2010

Ethyl Benzene (CAS 100-41-4)

Listed: June 11, 2004

**California Proposition 65 - CRT: Listed date/Developmental toxin**

Toluene (CAS 108-88-3)

Listed: January 1, 1991

**US, California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Cumene (CAS 98-82-8)

Ethyl Benzene (CAS 100-41-4)

Toluene (CAS 108-88-3)

Xylene (Mixed Isomers) (CAS 1330-20-7)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision****Issue date** 04-26-2016**Revision date** 02-12-2019**Version #** 03

**Disclaimer** Superior Oil Company, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.

**Revision information** This document has undergone significant changes and should be reviewed in its entirety.



## SAFETY DATA SHEET

### 1. Identification

**Product identifier** Mineral Spirits  
**Other means of identification**  
**Product code** 0110040  
**Recommended use** Solvent  
**Recommended restrictions** None known.  
**Manufacturer information** Superior Oil Company, Inc.  
1402 North Capitol Avenue, Suite #100  
Indianapolis, IN 46202 US  
(317) 781-4400  
(317) 781-4400

### 2. Hazard(s) identification

**Physical hazards** Flammable liquids Category 3  
**Health hazards** Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2  
Carcinogenicity Category 2  
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation  
Specific target organ toxicity, single exposure Category 3 narcotic effects  
Specific target organ toxicity, repeated exposure Category 2  
Aspiration hazard Category 1  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger

#### Hazard statement

H226 Flammable liquid and vapor.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure

#### Precautionary statement

##### Prevention

P262 Do not get in eyes, on skin, or on clothing.  
P261 Avoid breathing vapors or mist.  
P202 Do not handle until all safety precautions have been read and understood  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.

P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
<b>Response</b>	
P301 + P310	If swallowed: Immediately call a poison center/doctor.
P331	Do NOT induce vomiting.
P303 + P361 + P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use appropriate media to extinguish.
<b>Storage</b>	
P235	Keep cool.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed
<b>Disposal</b>	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Stoddard Solvent		8052-41-3	70-90
Trimethylbenzene, Mixed Isomers		25551-13-7	< 20
1,2,4-Trimethylbenzene		95-63-6	1-10
Nonane		111-84-2	< 3
Xylene (Mixed Isomers)		1330-20-7	< 3
Cumene		98-82-8	0.1-1
Ethyl Benzene		100-41-4	0.1-1

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Flammable liquid and vapor.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cumene (CAS 98-82-8)	PEL	245 mg/m <sup>3</sup>
		50 ppm

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Ethyl Benzene (CAS 100-41-4)	PEL	435 mg/m <sup>3</sup> 100 ppm
Stoddard Solvent (CAS 8052-41-3)	PEL	2900 mg/m <sup>3</sup> 500 ppm
Xylene (Mixed Isomers) (CAS 1330-20-7)	PEL	435 mg/m <sup>3</sup> 100 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Cumene (CAS 98-82-8)	TWA	50 ppm
Ethyl Benzene (CAS 100-41-4)	TWA	20 ppm
Nonane (CAS 111-84-2)	TWA	200 ppm
Stoddard Solvent (CAS 8052-41-3)	TWA	100 ppm
Trimethylbenzene, Mixed Isomers (CAS 25551-13-7)	TWA	25 ppm
Xylene (Mixed Isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
1,2,4-Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m <sup>3</sup> 25 ppm
Cumene (CAS 98-82-8)	TWA	245 mg/m <sup>3</sup> 50 ppm
Ethyl Benzene (CAS 100-41-4)	STEL	545 mg/m <sup>3</sup> 125 ppm
	TWA	435 mg/m <sup>3</sup> 100 ppm
Nonane (CAS 111-84-2)	TWA	1050 mg/m <sup>3</sup> 200 ppm
Stoddard Solvent (CAS 8052-41-3)	Ceiling	1800 mg/m <sup>3</sup>
	TWA	350 mg/m <sup>3</sup>
Trimethylbenzene, Mixed Isomers (CAS 25551-13-7)	TWA	125 mg/m <sup>3</sup> 25 ppm
Xylene (Mixed Isomers) (CAS 1330-20-7)	STEL	655 mg/m <sup>3</sup> 150 ppm
	TWA	435 mg/m <sup>3</sup> 100 ppm



**Biological limit values****ACGIH Biological Exposure Indices Components**

Value	Determinant	Specimen	Sampling Time
Ethyl Benzene (CAS 100-41-4) 0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
Xylene (Mixed Isomers) (CAS 1330-20-7) 1.5 g/g	Methylhippuric acids	Creatinine in urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines****US - California OELs: Skin designation**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

Cumene (CAS 98-82-8) Skin designation applies.

**US - Tennessee OELs: Skin designation**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Cumene (CAS 98-82-8) Can be absorbed through the skin.

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

<b>Appearance</b>	Clear.
<b>Physical state</b>	Liquid.
<b>Color</b>	Colorless.
<b>Odor</b>	Hydrocarbon.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	314.6 °F (157 °C)
<b>Flash point</b>	107.6 °F (42.0 °C) Closed Cup (ASTM D-56)
<b>Evaporation rate</b>	< 1 (BuAc = 1)
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	0.6 %
<b>Flammability limit - upper (%)</b>	8 %

Material name: Mineral Spirits

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Vapor pressure	0.14 mm Hg @ 20 C estimated
Vapor pressure temp.	@ 20 Deg. C
Vapor density	> 1 (Air = 1)
Solubility(ies)	
Solubility (water)	Negligible.
Auto-ignition temperature	446 °F (230 °C) estimated
Other information	
Pounds per gallon	6.6 lb/gal
Specific gravity	0.792
VOC	100 % estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport
<b>Chemical stability</b>	Material is stable under normal conditions. Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon monoxide. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

### Information on toxicological effects

<b>Acute toxicity</b>	May be fatal if swallowed and enters airways.
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Components	Species	Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 3160 mg/kg
<b>Oral</b>		
LD50	Rat	6 g/kg
Cumene (CAS 98-82-8)		
<b>Acute</b>		
<b>Inhalation</b>		
LC50	Mouse	24.7 mg/l, 2 Hours
<b>Oral</b>		
LD50	Rat	1400 mg/kg

Components	Species	Test Results
Ethyl Benzene (CAS 100-41-4)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rabbit	17800 mg/kg
<b>Oral</b>		
LD50	Rat	3500 mg/kg
Trimethylbenzene, Mixed Isomers (CAS 25551-13-7)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	8970 mg/kg
Xylene (Mixed Isomers) (CAS 1330-20-7)		
<u>Acute</u>		
<b>Dermal</b>		
LD50	Rabbit	> 43 g/kg
<b>Inhalation</b>		
LC50	Rat	6350 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	3523 - 8600 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Suspected of causing cancer.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Cumene (CAS 98-82-8)	2B Possibly carcinogenic to humans.	
Ethyl Benzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.	
Stoddard Solvent (CAS 8052-41-3)	3 Not classifiable as to carcinogenicity to humans.	
Xylene (Mixed Isomers) (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>		
Not regulated.		
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>		
Cumene (CAS 98-82-8)	Reasonably Anticipated to be a Human Carcinogen.	
<b>Reproductive toxicity</b>	Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals.	
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation. May cause drowsiness and dizziness.	
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.	
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.	
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components	Species		Test Results
1,2,4-Trimethylbenzene (CAS 95-63-6)			
Aquatic			
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	7.19 - 8.28 mg/l, 96 hours
Cumene (CAS 98-82-8)			
Aquatic			
Crustacea	EC50	Brine shrimp ( <i>Artemia</i> sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout ( <i>Oncorhynchus mykiss</i> )	2.7 mg/l, 96 hours
Ethyl Benzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> )	7.5 - 11 mg/l, 96 hours
Xylene (Mixed Isomers) (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	7.711 - 9.591 mg/l, 96 hours

**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

#### Bioaccumulative potential

##### Partition coefficient n-octanol / water (log Kow)

Cumene	3.66
Ethyl Benzene	3.15
Nonane	5.46
Xylene (Mixed Isomers)	3.12
	3.12 - 3.2

**Mobility in soil** No data available.

**Other adverse effects** The product contains volatile organic compounds which have a photochemical ozone creation potential.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D001: Waste Flammable material with a flash point <140 F The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT BULK

<b>UN number</b>	1268
<b>Proper shipping name</b>	Petroleum Distillates, n.o.s.
<b>Hazard class</b>	Combustible Liquid
<b>Packing group</b>	III
<b>ERG code</b>	128

#### DOT NON-BULK

Not regulated as dangerous goods.

## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Nonane (CAS 111-84-2) 1.0 % One-Time Export Notification only.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Cumene (CAS 98-82-8) Listed.  
Ethyl Benzene (CAS 100-41-4) Listed.  
Nonane (CAS 111-84-2) Listed.  
Xylene (Mixed Isomers) (CAS 1330-20-7) Listed.

#### SARA 304 Emergency release notification

Not regulated.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312

Yes

#### Hazardous chemical

##### Classified hazard categories

Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Carcinogenicity  
Specific target organ toxicity (single or repeated exposure)  
Aspiration hazard

#### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
1,2,4-Trimethylbenzene	95-63-6	1-10
Cumene	98-82-8	0.1-1
Ethyl Benzene	100-41-4	0.1-1
Xylene (Mixed Isomers)	1330-20-7	< 3

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Cumene (CAS 98-82-8)  
Ethyl Benzene (CAS 100-41-4)  
Xylene (Mixed Isomers) (CAS 1330-20-7)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

Not regulated.

### US state regulations

#### California Proposition 65



**WARNING:** This product can expose you to chemicals including Ethyl Benzene, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Cumene (CAS 98-82-8) Listed: April 6, 2010  
Ethyl Benzene (CAS 100-41-4) Listed: June 11, 2004

#### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2,4-Trimethylbenzene (CAS 95-63-6)  
Cumene (CAS 98-82-8)  
Ethyl Benzene (CAS 100-41-4)  
Stoddard Solvent (CAS 8052-41-3)  
Trimethylbenzene, Mixed Isomers (CAS 25551-13-7)  
Xylene (Mixed Isomers) (CAS 1330-20-7)

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 03-24-2017  
**Revision date** 10-04-2018  
**Version #** 02

**Disclaimer**

Superior Oil Company, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety



## SAFETY DATA SHEET

### 1. Identification

Product identifier Toluene  
Other means of identification  
Product code 0100001  
Recommended use Solvent  
Recommended restrictions None known.  
Manufacturer information Superior Oil Company, Inc.  
1402 North Capitol Avenue, Suite #100  
Indianapolis, IN 46202 US  
Information: (317) 781-4400  
Emergency: (317) 781-4400

### 2. Hazard(s) identification

Physical hazards Flammable liquids Category 2  
Health hazards Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2A  
Reproductive toxicity (the unborn child) Category 2  
Specific target organ toxicity, single exposure Category 3 narcotic effects  
Specific target organ toxicity, repeated exposure Category 2  
Aspiration hazard Category 1  
Environmental hazards Not classified.  
OSHA defined hazards Not classified.  
Label elements



Signal word Danger

#### Hazard statement

H225 Highly flammable liquid and vapor.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H335 May cause respiratory irritation.  
H361 Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure

#### Precautionary statement

##### Prevention

P262 Do not get in eyes, on skin, or on clothing.  
P261 Avoid breathing vapors or mist  
P202 Do not handle until all safety precautions have been read and understood  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P264 Wash thoroughly after handling.



P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

P301 + P310 If swallowed: Immediately call a poison center/doctor.  
P331 Do NOT induce vomiting.  
P303 + P361 + P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P332 + P313 If skin irritation occurs: Get medical advice/attention.  
P304 + P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a poison center/doctor if you feel unwell.  
P308 + P313 If exposed or concerned: Get medical advice/attention.  
P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/attention.  
P370 + P378 In case of fire: Use appropriate media to extinguish.

#### Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.

#### Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
Toluene		108-88-3	90-100

### 4. First-aid measures

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**Skin contact** Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion** Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

**General information** Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.</p> <p>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

Material	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

#### US. ACGIH Threshold Limit Values

Material	Type	Value
Toluene (CAS 108-88-3)	TWA	20 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Toluene (CAS 108-88-3)	STEL	560 mg/m <sup>3</sup>
		150 ppm
	TWA	375 mg/m <sup>3</sup>
		100 ppm

### Biological limit values

#### ACGIH Biological Exposure Indices

Material	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

Toluene (CAS 108-88-3) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3) Skin designation applies.

<b>Appropriate engineering controls</b>	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
<b>Individual protection measures, such as personal protective equipment</b>	
Eye/face protection	Chemical respirator with organic vapor cartridge and full facepiece.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

Appearance	Clear.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	Aromatic Hydrocarbon.
pH	Not available.
Melting point/freezing point	-139 °F (-95 °C)
Initial boiling point and boiling range	231.08 °F (110.6 °C)
Flash point	39.2 °F (4.0 °C) Closed Cup (ASTM D-56)
Evaporation rate	> 1 (BuAc = 1)
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit - lower (%)	1.1 %
Flammability limit - upper (%)	7.1 %
Vapor pressure	21 mm Hg @ 20 °C
Vapor density	> 1 (Air = 1)
Solubility(ies)	
Solubility (water)	Insoluble
Auto-ignition temperature	896 °F (480 °C)
<b>Other information</b>	
Pounds per gallon	7.258 lb/gal
Specific gravity	0.871
VOC (Weight %)	100 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport
<b>Chemical stability</b>	Material is stable under normal conditions. Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.

**Hazardous decomposition products**

Carbon monoxide. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

**11. Toxicological information**

**Information on likely routes of exposure**

<b>Inhalation</b>	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics**

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain

**Information on toxicological effects**

**Acute toxicity** May be fatal if swallowed and enters airways. Narcotic effects

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	12124 mg/kg 14.1 ml/kg
<b>Inhalation</b>		
LC50	Mouse	5320 ppm, 8 Hours 400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours 12200 ppm, 2 Hours 8000 ppm, 4 Hours
<b>Oral</b>		
LD50	Rat	2.6 g/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Reproductive toxicity** Suspected of damaging the unborn child.

**Specific target organ toxicity - single exposure** May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species		Test Results
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

### Bioaccumulative potential

**Partition coefficient n-octanol / water (log Kow)**  
2.73

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT BULK / NON-BULK:

<b>UN number</b>	1294
<b>Proper shipping name</b>	Toluene
<b>Hazard class</b>	3
<b>Packing group</b>	II
<b>Reportable quantity</b>	1000
<b>ERG code</b>	130

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Toluene (CAS 108-88-3) Listed.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories**

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312** Yes**Hazardous chemical****SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Toluene	108-88-3	100

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Toluene (CAS 108-88-3)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Clean Water Act (CWA)** Hazardous substance  
**Section 112(r) (40 CFR** Priority pollutant  
**68.130)** Toxic pollutant

**Safe Drinking Water Act** 1 mg/l  
**(SDWA)** 1 mg/l

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))**

Toluene (CAS 108-88-3)

**DEA Essential Chemical Code Number**

Toluene (CAS 108-88-3) 6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**US state regulations****US - New Jersey RTK - Substances: Listed substance**

Toluene (CAS 108-88-3)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Toluene (CAS 108-88-3)

**US. Massachusetts RTK - Substance List**

Toluene (CAS 108-88-3)

**US. New Jersey Worker and Community Right-to-Know Act**

Toluene (CAS 108-88-3)

**US. Pennsylvania RTK - Hazardous Substances**

Toluene (CAS 108-88-3)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Toluene (CAS 108-88-3)

**US. Rhode Island RTK**

Toluene (CAS 108-88-3)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Toluene (CAS 108-88-3) Listed: January 1, 1991

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Material name: Toluene

0100001 Version #: 02 Revision date: 09-29-2017 Issue date: 10-23-2015

SDS US

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Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 10-23-2015

**Revision date** 09-29-2017

**Version #** 02

**Disclaimer** Superior Oil Company, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty is expressed or implied regarding the accuracy or completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes all risk and liabilities. Buyer accepts and uses this material on these conditions.

**Revision information** This document has undergone significant changes and should be reviewed in its entirety.

## **Appendix II**

### ***Analytical Reports and Waste Manifests***

RECLAIMED ENERGY DIVISION  
SUPERIOR OIL COMPANY, INC.  
1500 WESTERN AVE.  
CONNERSVILLE, IN 47331  
(765) 825-7101

## Analytical Report

AR#: AR#17069  
Date Received: 02/20/2017  
Date Completed: 02/21/2017  
Lab Sample #: 170220002  
Analyst: JR  
Resin Type: 9\  
Name of Waste: THINNER/PAINT  
Generating Process: PAINT CLEANUP

### Customer:

STELLO PRODUCTS INC.  
840 W. HILLSIDE  
SPENCER, IN 47460

Contact: GREG SUMMERLOT  
Phone: (812)829-2246

Customer Code: STEL47460

Branch: 01S

EPA Number: EXEMPT

Sales Rep: ROBERT HAGAN

### FINGERPRINT

Beilstein..... POS  
Total Chlorine: 0.62  
Heat Content...: NP (BTU's/LB)  
Specific Grav.: 0.85 (@ 68 (I F)  
Flash Point...: <100 (IF GC  
Ph.....: 6.24  
Multilayer..... NO  
Free Water..... 0 %  
Water In Solut: 0.44 %  
Free Liquids...: 100 %  
Free Solids...: 0 %  
Color.....: DK Brown

### RECOVERED SOLVENT

Initial Boiling Point: • F  
Dry Point.....: • F  
% Volatiles.....: %  
Est Percent Recovery.: %  
Solids.....: %  
Oils.....: %  
Water In Solution....: %  
Beilstein.....: POS  
ASTM D1353-92.....  
% SOLIDS=3.02% (0.0263 g/ml)  
NO Cl2 solvents per GCMS

### SOLVENT

### COMPOSITION

Toluene 85.70 %  
Xylene 0.06 %  
Aliphatics 0.08 %  
Aromatic 150 1.80 %  
Aromatic 200 0.35 %  
TOTAL DILUTENTS: 87.99 %  
PM Acetate 0.24 %  
Misc. Esters 1.02 %  
TOTAL ESTERS: 1.26 %  
EB Glycol Ether (EB-EGME) 5.19 %  
TOTAL GLYCOL ETHERS: 5.19 %  
Methyl Ethyl Ketone 5.28 %  
Cyclohexanone 0.28 %  
TOTAL KETONES: 5.56 %

GRAND TOTAL: 100.00 %

RECLAIMED ENERGY DIVISION  
SUPERIOR OIL COMPANY, INC.  
1500 WESTERN AVE.  
CONNERSVILLE, IN 47331  
(765) 825-7101

## Analytical Report

AR#: AR#17456  
Date Received: 09/11/2018  
Date Completed: 09/12/2018  
Lab Sample #: 180911001  
Analyst: CM  
Resin Type:  
Name of Waste: PAINT SOLIDS  
Generating Process: PAINT BOOTH CLEAN OUT

**Customer:**

STELLO PRODUCTS INC.  
840 W. HILLSIDE  
SPENCER, IN 47460

Customer Code: STEL47460

Branch: 01S

EPA Number: EXEMPT

Sales Rep: ROBERT HAGAN

Contact: GREG SUMMERLOT  
Phone: (812)829-2246

**FINGERPRINT**

Beilstein..... N/A  
Total Chlorine: N/A  
Heat Content...: N/A (BTU's/LB)  
Specific Grav.: N/A (@ 68 (1 F)  
Flash Point...: N/A (1F PMCC  
Ph.....: 7.04  
Multilayer...: NO  
Free Water....: 0 %  
Water In Solut: N/A %  
Free Liquids...: 0 %  
Free Solids...: 100 %  
Color.....: MULTI

**RECOVERED SOLVENT**

Initial Boiling Point: ° F  
Dry Point.....: ° F  
% Volatiles.....: %  
Est Percent Recovery.: %  
Solids.....: %  
Oils.....: %  
Water In Solution...: %  
Beilstein.....: N/A  
ASTM D1353-92.....  
% SOLIDS=NA

**SOLVENT**

NO GC: 100% SLUDGE

**COMPOSITION**

100.00 %

TOTAL MISCELLANEOUS: 100.00 %

GRAND TOTAL: 100.00 %

EEI Customer # _____	<b>ENVIRONMENTAL ENTERPRISES, INC</b>	EEI Profile # <b>X</b>
Customer Reference _____	<b>CONFIDENTIAL WASTE PROFILE</b>	Previous Profile _____
Sample Submitted <input type="checkbox"/> Yes <input type="checkbox"/> No		Sales Code: _____

**PART (A)-GENERATOR & CUSTOMER INFORMATION**

<b>1. Generator Name</b> <b>STELLO PRODUCTS</b> <b>Site Address</b> <b>840 W. HILLSIDE AVE</b> <b>City, State Zip</b> <b>SPENCER, IN 47460</b> <b>Contact Name</b> <b>TODD ZELLERS</b> <b>Phone</b> <b>765-720-1558</b> <b>Fax</b> _____ <b>E-mail Address</b> _____ <b>24-Hour Emergency Number</b> _____ <b>Generator Status</b> <input type="checkbox"/> LQG <input type="checkbox"/> SQG <input checked="" type="checkbox"/> CESQ <b>US EPA ID Number</b> <b>CESQG</b>	<b>2. Customer Name</b> <b>LIQUID WASTE REMOVAL</b> <b>Address</b> <b>500 S POLK STREET SUITE 100</b> <b>City, State Zip</b> <b>GREENWOOD, IN 46143</b> <b>Contact Name</b> <b>MATTHEW MORRIS</b> <b>Phone</b> <b>317-881-9754</b> <b>Fax</b> <b>317-889-0383</b> <b>E-mail Address</b> <b>MMORRIS@LIQUIDWASTEREMOVAL.COM</b> <b>3. Return Manifest To</b> _____ <b>Address</b> _____ <b>City, State Zip</b> _____
--	--

**PART(B)-GENERAL INFORMATION**

<b>4. Common Name</b> <b>WASTE CORROSVIE LIQUID</b>	
<b>5. Process Generating Waste</b> <b>OLD / OBSOLETE MATERIAL PREP FOR METAL CLEANING</b>	
<b>6. Is this waste contained in small packages that are in a larger shipping container?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If yes complete Item 6a- 6c</b>	
<b>6a. Is this a lab pack?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If "Yes" attach inventories</b>	<b>6b. Is waste a packaged consumer product?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>6c. If 6a and 6b are "No" describe inner packages</b> _____	
<b>7. Anticipated Volume</b> <b>4</b> <b>Units</b> <input type="checkbox"/> Tons <input type="checkbox"/> Yards <input type="checkbox"/> Gallons <input checked="" type="checkbox"/> Drums <input type="checkbox"/> Pallets <input type="checkbox"/> Totes <input type="checkbox"/> Cylinders <b>(Attach Addendum)</b>	
<b>8. Shipment Frequency</b> <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Yearly <input checked="" type="checkbox"/> One Time Only <b>(If a lab pack check "One Time Only")</b>	
<b>9. Packaging</b> <input type="checkbox"/> Tanker <input type="checkbox"/> Roll-off/Dump <input type="checkbox"/> Yd Bag/Box <input type="checkbox"/> Totes <input type="checkbox"/> Boxes on Pallets <input type="checkbox"/> Drum <b>(Size)</b> <b>55 GAL</b> <input type="checkbox"/> Cylinder	
<b>10. DOT Description</b> <b>WASTE CORROSVIE LIQUIDS, TOXIC, N.O.S., 8, (6.1), PGII</b>	
<b>10a Technical name(s)</b> _____	<b>10b. Poison Inhalation Hazard</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If "Yes" list Hazard Zone</b> _____

**PART(C)-REGULATORY INFORMATION**

<b>11. US EPA Form Code</b> _____	<b>12. US EPA Source Code</b> _____	<b>13. Is waste a US EPA Hazardous Waste?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>13a. If Item 13 is "Yes" list applicable codes</b> <b>D002, D007</b>		
<b>14. Identify state waste codes if applicable</b> _____		<b>15. Is this a Universal Waste?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>16. Is this material RCRA Exempt?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If "Yes" describe</b> _____		
<b>17. PCB</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> <50 ppm <input type="checkbox"/> 50-500 ppm <input type="checkbox"/> >500 ppm <b>Actual</b>		<b>18. If &lt;50 ppm is it a regulated PCB?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>19. Is this a virgin chemical product?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>20. Is SDS attached?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>21. Is this a spill cleanup?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>22. Is this an F001-F005 solvent waste?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>23. Is waste used in electroplating?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>24. Is waste an oxidizer?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If Yes does it contain organic material including debris?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>25. Does waste contain debris?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>26. Is waste a pharmaceutical product?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**PART(D)-CHEMICAL COMPOSITION, CHEMICAL PROPERTIES, & PHYSICAL PROPERTIES**

<b>27. Composition: List all constituents present in waste including debris. Total should be at least 100 %</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Constituent</th> <th style="width: 10%;">Actual</th> <th style="width: 10%;">Range</th> <th style="width: 10%;">Units</th> </tr> </thead> <tbody> <tr> <td>AMMONIUM BIFLUORIDE</td> <td>10%</td> <td></td> <td></td> </tr> <tr> <td>CHROMIC ACID</td> <td>12%</td> <td></td> <td></td> </tr> <tr> <td>NITRIC ACID</td> <td>&lt;5%</td> <td></td> <td></td> </tr> <tr> <td>WATER</td> <td>75 %</td> <td></td> <td></td> </tr> <tr><td> </td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td></tr> </tbody> </table>				Constituent	Actual	Range	Units	AMMONIUM BIFLUORIDE	10%			CHROMIC ACID	12%			NITRIC ACID	<5%			WATER	75 %																							<b>33. Potential High Hazards</b> <b>Check all that apply</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Air Reactive <input type="checkbox"/> DEA Regulated <input type="checkbox"/> Dioxin (& dioxin precursors) <input type="checkbox"/> Explosive <input type="checkbox"/> Infectious <input type="checkbox"/> Metal Powder <input type="checkbox"/> Organic Peroxide <input type="checkbox"/> OSHA Carcinogen <input type="checkbox"/> Peroxide Forming <input type="checkbox"/> Polymerizable monomer <input type="checkbox"/> Pyrophoric <input type="checkbox"/> Radioactive <input type="checkbox"/> Sharps <input type="checkbox"/> Spontaneously Combustible <input type="checkbox"/> Temperature Controlled <input type="checkbox"/> Water Reactive		<b>34. Color</b> <b>VARIOUS</b> <b>35. Odor</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Mild <input type="checkbox"/> Strong <b>Describe</b> _____ <b>36. Flash Point F</b> <input type="checkbox"/> <100 <input checked="" type="checkbox"/> >200 <input type="checkbox"/> 100-140 <b>Actual</b> <input type="checkbox"/> 140-200 <b>37. pH</b> <input checked="" type="checkbox"/> <2 <input type="checkbox"/> 8-10 <input type="checkbox"/> 2-4 <input type="checkbox"/> 10-12.5 <input type="checkbox"/> 4-6 <input type="checkbox"/> >12.5 <input type="checkbox"/> 6-8 <b>Actual</b>	
Constituent	Actual	Range	Units																																												
AMMONIUM BIFLUORIDE	10%																																														
CHROMIC ACID	12%																																														
NITRIC ACID	<5%																																														
WATER	75 %																																														
<b>28. Physical State</b> <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Powder <input type="checkbox"/> Gel <input type="checkbox"/> Fused <input type="checkbox"/> Gas <input type="checkbox"/> Sludge <input type="checkbox"/> Aerosol		<b>29. Layers</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Bi-layered <input type="checkbox"/> Multilayered <b>30. Settled Solids</b> <input checked="" type="checkbox"/> < 1 % <input type="checkbox"/> >50 % <input type="checkbox"/> 1-10 % <input type="checkbox"/> 10-50 % <b>31. % Water</b> _____		<b>38. BTU/lb.</b> <input checked="" type="checkbox"/> <2000 <input type="checkbox"/> < 1 % <input type="checkbox"/> 2000-5000 <input type="checkbox"/> 1-25 % <input type="checkbox"/> 5000-10000 <input type="checkbox"/> >25 % <input type="checkbox"/> >10000 <b>Actual</b>																																											
<b>32. Viscosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High		<b>39. Halogens</b> <input type="checkbox"/> < 1 % <input type="checkbox"/> 1-25 % <input type="checkbox"/> >25 % <b>Actual</b> _____ <b>40. Specific Gravity</b> <b>&gt;1</b>																																													

**PART(E) - "D" CODE CHARACTERISTIC CONSTITUENTS**

41. Please check the box next to each waste code to indicate if the waste code applies to waste. A total concentration value (actual or range) must be listed for each constituent that is checked. Do not list total concentration as "> (regulatory level)".

**Waste Code Characteristic (Check all characteristic that apply)**

- ☐ D001 (Ignitability) ☐ Ignitable liquids (flash point <140 °F) ☐ Oxidizers ☐ Reactives ☐ Compressed Gases  
☒ D002 (Corrosivity) ☒ Acid Liquids pH ≤2 ☐ Alkaline Liquids pH ≥12.5 ☐ Other Corrosives  
☐ D003 (Reactivity) ☐ Reactive Sulfides ☐ Water Reactives ☐ Reactive Cyanides ☐ Explosives ☐ Other Reactives

Waste Code & Constituent	Regulatory Level (TCLP)	Total Concentration	Units	Waste Code & Constituent	Regulatory Level (TCLP)	Total Concentration	Units
<input type="checkbox"/> D004 Arsenic	5.0 mg/l			<input type="checkbox"/> D024 m-Cresol	200.0 mg/l		
<input type="checkbox"/> D005 Barium	100.0 mg/l			<input type="checkbox"/> D025 p-Cresol	200.0 mg/l		
<input type="checkbox"/> D006 Cadmium	1.0 mg/l			<input type="checkbox"/> D026 Cresol	200.0 mg/l		
<input checked="" type="checkbox"/> D007 Chromium (Total)	5.0 mg/l	>5		<input type="checkbox"/> D027 1, 4-Dichlorobenzene	7.5 mg/l		
<input type="checkbox"/> D008 Lead	5.0 mg/l			<input type="checkbox"/> D028 1, 2-Dichloroethane	0.5 mg/l		
<input type="checkbox"/> D009 Mercury	0.2 mg/l			<input type="checkbox"/> D029 1, 1-Dichloroethylene	0.7 mg/l		
<input type="checkbox"/> D010 Selenium	1.0 mg/l			<input type="checkbox"/> D030 2, 4-Dinitrotoluene	0.13 mg/l		
<input type="checkbox"/> D011 Silver	5.0 mg/l			<input type="checkbox"/> D031 Heptachlor (and its epoxide)	0.008 mg/l		
<input type="checkbox"/> D012 Endrin	0.02 mg/l			<input type="checkbox"/> D032 Hexachlorobenzene	0.13 mg/l		
<input type="checkbox"/> D013 Lindane	0.4 mg/l			<input type="checkbox"/> D033 Hexachlorobutadiene	0.5 mg/l		
<input type="checkbox"/> D014 Methoxychlor	10.0 mg/l			<input type="checkbox"/> D034 Hexachlorethane	3.0 mg/l		
<input type="checkbox"/> D015 Toxaphene	0.5 mg/l			<input type="checkbox"/> D035 Methyl ethyl ketone	200.0 mg/l		
<input type="checkbox"/> D016 2, 4-D	10.0 mg/l			<input type="checkbox"/> D036 Nitrobenzene	2.0 mg/l		
<input type="checkbox"/> D017 2, 4, 5-TP (Silvex)	1.0 mg/l			<input type="checkbox"/> D037 Pentachlorophenol	100.0 mg/l		
<input type="checkbox"/> D018 Benzene	0.5 mg/l			<input type="checkbox"/> D038 Pyridine	5.0 mg/l		
<input type="checkbox"/> D019 Carbon Tetrachloride	0.5 mg/l			<input type="checkbox"/> D039 Tetachloroethylene	0.7 mg/l		
<input type="checkbox"/> D020 Chlordane	0.03 mg/l			<input type="checkbox"/> D040 Trichloroethylene	0.5 mg/l		
<input type="checkbox"/> D021 Chlorobenzene	100.0 mg/l			<input type="checkbox"/> D041 2, 4, 5-Trichlorophenol	400.0 mg/l		
<input type="checkbox"/> D022 Chloroform	6.0 mg/l			<input type="checkbox"/> D042 2, 4, 6-Trichlorophenol	2.0 mg/l		
<input type="checkbox"/> D023 o-Cresol	200.0 mg/l			<input type="checkbox"/> D043 Vinyl Chloride	0.2 mg/l		

42. If this is a characteristic hazardous waste does it contain any Underlying Hazardous Constituents (UHC's)? The complete list of UHC's can be found in 40 CFR 268.48 ☐ Yes ☒ No If "Yes" please list

**PART(F) - OTHER CONSTITUENTS**

43. Please check the box next to each constituent that applies to waste and if checked list total concentrations (actual or range).

Metal Constituent	Concentration	Units	Other Constituent	Concentration	Units	Other Constituents	Concentration	Units
<input type="checkbox"/> Aluminum			<input type="checkbox"/> Thallium			<input type="checkbox"/> Cyanides (Total)		
<input type="checkbox"/> Antimony			<input type="checkbox"/> Zinc			<input type="checkbox"/> Cyanides (Amenable)		
<input type="checkbox"/> Beryllium			<input type="checkbox"/> Ammonia			<input type="checkbox"/> Sulfides (total)		
<input type="checkbox"/> Copper			<input type="checkbox"/> Bromine			<input type="checkbox"/> Nitrates		
<input type="checkbox"/> Hexavalent Chrome			<input type="checkbox"/> Chlorine			<input type="checkbox"/> Nitrites		
<input type="checkbox"/> Nickel			<input type="checkbox"/> Iodine			<input type="checkbox"/> Sulfur		

**44. Land Disposal Restrictions Check One**

- ☒ Needs treatment to meet certain applicable standards  
☐ Treated to meet all applicable standards  
☐ Meets all applicable standards without treatment  
☐ No federally mandated treatment standards apply

**45. Clean Air Act Information**

- 45a. Does waste contain >500 ppmw VOC'S? ☐ Yes ☒ No  
45b. Does waste come from facility subject to 40 CFR 61.340-358 (Benzene NESHAP)? ☐ Yes ☒ No What is the benzene concentration in the waste?  
What is the Benzene TAB for your facility? (MG/year)

46. Special Handling Requirements Does this material require any special handling related to employee safety, storage conditions, spill clean-up, sampling, etc.? Yes ☐ No ☒ If Yes, explain


47. Infectious Waste Determination Does waste contain or has it contacted any of the following: Animal wastes, human blood, blood products, body fluids, microbiological waste, pathological waste, human or animal derived serums or proteins or any other potentially infectious material? ☐ Yes ☒ No If "yes" a non-infectious waste certification required

48. Basis for Waste Determination ☒ Knowledge of waste (Describe)

☐ Test Data (attach)

49. Attachments ☐ Lab data ☒ SDS ☐ Packing List ☐ Cylinder Addendum ☐ Other (list)

50. CERTIFICATION Sign and date. I certify that I am employed by the generator or am an authorized agent acting on behalf of the generator. The above information and attachments are true and correct and is based on analysis of a representative sample of the waste in accordance with EPA Guidelines Document SW-846 or my thorough knowledge of the waste. I authorize EEI to obtain a sample from any waste shipment for purposes of confirmation and verification. I authorize EEI personnel to add supplemental information to the profile, to correct clerical errors and to amend the profile as necessary if discrepancies with the profiled information are discovered during the approval process.

Signature  MATTHEW MORRIS LWR JUNE 3, 2019  
Printed Name Company Date

RECLAIMED ENERGY DIVISION  
SUPERIOR OIL COMPANY, INC.  
1500 WESTERN AVE.  
CONNERSVILLE, IN 47331  
(765) 825-7101

## Analytical Report

AR#: AR#17456  
Date Received: 09/11/2018  
Date Completed: 09/12/2018  
Lab Sample #: 180911001  
Analyst: CM  
Resin Type:  
Name of Waste: PAINT SOLIDS  
Generating Process: PAINT BOOTH CLEAN OUT

**Customer:**

STELLO PRODUCTS INC.  
840 W. HILLSIDE  
SPENCER, IN 47460

Customer Code: STEL47460

Branch: 015

EPA Number: EXEMPT

Sales Rep: JIMMY COCKERILL

Contact: GREG SUMMERLOT  
Phone: (812)829-2246

**FINGERPRINT****RECOVERED SOLVENT**

Beilstein..... N/A  
Total Chlorine: N/A  
Heater Content: N/A (HCL % LB)  
Specific Gravity: N/A (12.88 @ 60)  
Flash Point: N/A (12.88 @ 60)  
Ph..... 7.00  
Multilayer: NO  
Free Water: 0  
Water In Solub: N/A  
Free Liquids: 0  
Free Solids: 100  
Color: MUDY

Initial Boiling Point: N/A  
Dry Point: N/A  
% Volatiles: N/A  
Est Percent Recovery: N/A  
Solids: N/A  
Oils: N/A  
Water In Solution: N/A  
Beilstein: N/A  
ASTM D1353-92: N/A  
% SOLIDS=NA

**SOLVENT****COMPOSITION**

NO GC: 100% SLUDGE

100.00 %  
TOTAL MISCELLANEOUS: 100.00 %  
GRAND TOTAL: 100.00 %



SUPERIOR OIL COMPANY, INC.  
RECLAIMED ENERGY DIVISION  
WASTE PROFILE REVIEW

09/24/2018

01:19 PM

GENERATOR INFORMATION

PURPOSE OF REVIEW

Name...: STELLO PRODUCTS INC.  
Addr1...: 840 W. HILLSIDE  
Addr2...:  
C/S/Z...: SPENCER, IN 47460  
Contact: GREG SUMMERLOT  
Phone...: (312)829-2246  
EPA ID.: EXEMPT

Branch.....: 01S  
Profile Date: 09/11/2018  
Salesman: JIMMY COCKERILL

Analytical Report Number...: AR#17456  
Waste Stream Description...: PAINT SOLIDS

Process Generating Waste...: PAINT BOOTH CLEAN OUT

Recommended Shipping Desc...: UN1263, WASTE PAINT RELATED MATERIAL, 3, PG II,

Reportable Quantity [RQ]....: RQ (D001)

Emergency Guide Number.....: 128      Handling Codes: H141

EPA Waste Codes.....: F005 F003 D001

24-Hour Emergency Phone No.:

SOS Information:

Comments.....:

Antistat.....: N

APPROVAL STATUS

Reviewed By: RON SNYDER

Date Reviewed: 09/18/2018      Status: APPROVED

ATTN: GREG SUMMERLOT

Please review the following information. This is what will be printed on all manifests, labels, and other paperwork provided. If this information is correct, sign and return to Reclaimed Energy.

## GENERATOR INFORMATION

STELLO PRODUCTS INC.  
840 W. HILLSIDE  
SPENCER, IN 47460

EXEMPT  
(812)829-2246  
CONTACT.: GREG SUMMERLOT  
SALES REP: JIMMY COCKERILL

## WASTE INFORMATION

APPROVAL #: AR#17456 COMMON NAME: PAINT SOLIDS

PRIMARY WASTE CODE.....: F005

ADDITIONAL WASTE CODES.: F003 D001

EPA HANDLING CODE.....: H141

RECOMMENDED DESCRIPTION: UN1263, WASTE PAINT RELATED MATERIAL, 3, PG 11, RQ (D001)

DOT Emergency Response Guide # 128

NO. OF LABELS -----

24 HOUR EMERGENCY PHONE NUMBER \*(REQUIRED) -----

\* THE U.S. DEPT. OF TRANSPORTATION REQUIRES THAT ANY "SHIPPER OF HAZARDOUS MATERIALS" MUST HAVE A 24 HOUR EMERGENCY PHONE NUMBER ON THE SHIPPING DOCUMENTS. IF YOU WOULD LIKE SUPERIOR TO PROVIDE THIS NUMBER, WRITE "SUPERIOR" ON THE ABOVE LINE AND COMPLETE PAGE 2 OF THIS INFORMATION SHEET. OTHERWISE PROVIDE YOUR OWN 24 HOUR EMERGENCY PHONE NUMBER ON THE ABOVE LINE AND DISCARD PAGE 2.

I believe these descriptions are complete and accurate to the best of my knowledge

Date \_\_\_\_\_

Signed \_\_\_\_\_

Return To: Reclaimed Energy - Attn: Debbie Cooper  
Mail: 1500 Westerr Ave, Connorsville, IN 47331  
Fax: (765) 827-1337 or E-mail: dcooper@superioroil.com

PLA ID

SEP 14 2016

STELLO PRODUCTS, INC

OK

Date	Invoice #
8/1/2016	24649

Bill To	Ship To
STELLO PRODUCTS INC 840 WEST HILLSIDE AVE SPENCER, IN 47460	

P.O. No.	Terms	Due Date	Rep
	Net 30	8/31/2016	

Description	Rate	Quantity	Unit	Total
DISPOSAL OF WASTE TO EEI	442.40			442.40

<b>Subtotal</b>	\$442.40
<b>Sales Tax</b>	\$0.00
<b>Payments/Credits</b>	\$0.00
<b>Balance Due</b>	\$442.40

Liquid Waste Removal, Inc.  
P.O. Box 795  
Greenwood, IN 46142  
(317) 881-9754 Fax (317) 889-0383

# WorkOrder/Invoice

24649

PO#:

Salesman:

**Job** STELLO PRODUCTS INC  
**Location:** 840 WEST HILLSIDE AVE  
SPENCER IN 47460

**Contact 1:** GREG SUMMERLOT

**Phone 1:** 812-829-2246

**Contact 2:**

**Phone 2:**

**Bill** STELLO PRODUCTS, INCORPORATED  
**To:** 840 WEST HILLSIDE AVE  
SPENCER IN 47460

## Comments:

TRANSPORTATION AND DISPOSAL OF WASTE TO EEI, HAZARDOUS.

## What To Deliver:

*No Exchange*

ONLY PICK UP 3 DRUMS PER MONTH TOTAL HAZARDOUS

*Bring 6 55 plastic closed Drums.*

Time In:

☐ AM  
☐ PM

Time Out:

☐ AM  
☐ PM

Truck:

*12*

Driver Initial:

*TB*

Description	Quantity	Price / Unit	Total
DISPOSAL OF WASTE DART 169 (X110065)	<i>1</i>	\$ 395.00 / DRUM	<i>395.00</i>
		\$ /	
		\$ /	
		\$ /	
		\$ /	
STOP CHARGE FOR NO PICKUP		\$ /	
ENERGY/SECURITY RECOVERY FEE		\$ /	<i>47.40</i>

In the event Liquid Waste Removal, Inc. is required to employ an attorney to collect any balances due, I agree to pay all incurred collection costs, including agency and attorney fees and court costs.

**Grand Total:**

*442.40*

Signature:



Date:

*7, 29, 16*

I hereby acknowledge the satisfactory completion of the above described work.

Liquid Waste Removal, Inc.  
P.O. Box 795  
Greenwood, IN 46142  
(317) 881-9754 Fax (317) 889-0383

LWR  
WASTE REMOVAL

WorkOrder/Invoice

24649

PO#:

Salesman:

**Job Location:** STELLO PRODUCTS INC  
840 WEST HILLSIDE AVE  
SPENCER IN 47460

**Contact 1:** GREG SUMMERLOT

**Phone 1:** 812-829-2246

**Contact 2:**

**Phone 2:**

**Bill To:** STELLO PRODUCTS, INCORPORATED  
840 WEST HILLSIDE AVE  
SPENCER IN 47460

**Comments:**

TRANSPORTATION AND DISPOSAL OF WASTE TO EEI, HAZARDOUS.

**What To Deliver:**

ONLY PICK UP 3 DRUMS PER MONTH TOTAL HAZARDOUS

6 55 plastic closed drums.

**Time In:**

☐ AM  
☐ PM

**Time Out:**

☐ AM  
☐ PM

**Truck:**

**Driver Initial:**

Description	Quantity	Price / Unit	Total
DISPOSAL OF WASTE DART 169 (X110065)	1	\$ 395.00 / DRUM	
		\$ /	
		\$ /	
		\$ /	
		\$ /	
STOP CHARGE FOR NO PICKUP		\$ /	
ENERGY/SECURITY RECOVERY FEE		\$ /	

In the event Liquid Waste Removal, Inc. is required to employ an attorney to collect any balances due, I agree to pay all incurred collection costs, including agency and attorney fees and court costs.

**Grand Total:**

**Date:** 3 / 27 / 16

**Signature:**

I hereby acknowledge the satisfactory completion of the above described work.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number			
					014771013 JJK			
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)						
Generator's Phone								
6. Transporter 1 Company Name		U.S. EPA ID Number						
7. Transporter 2 Company Name		U.S. EPA ID Number						
8. Designated Facility Name and Site Address		U.S. EPA ID Number						
Facility's Phone								
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
			No.	Type				
	1.							
	2.							
	3.							
	4.							
14. Special Handling Instructions and Additional Information								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Offor's Printed/Typed Name		Signature			Month	Day	Year	
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____					
	Transporter signature (for exports only):							
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials							
	Transporter 1 Printed/Typed Name		Signature			Month	Day	Year
	Transporter 2 Printed/Typed Name		Signature			Month	Day	Year
DESIGNATED FACILITY	18. Discrepancy							
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
	Manifest Reference Number: _____							
	18b. Alternate Facility (or Generator)		U.S. EPA ID Number					
	Facility's Phone:							
	18c. Signature of Alternate Facility (or Generator)		Month			Day	Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
	1.	2.	3.	4.				
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name		Signature			Month	Day	Year	



A. Generator Name	STELLO PRODUCTS INC.	US EPA ID #	INR000103655
Address	840 WEST HILLSIDE AVE	Manifest #	014771013JJK
	SPENCER, IN 47460	Profile #(s)	X110065

Restricted Waste contained in this shipment and referenced by the above Manifest number that are listed below are subject to the treatment standards set forth in 40 CFR 268.40. For each waste code, list the corresponding Subcategory, if applicable. Record an "X" in the appropriate column below for Treatability Group and each disclosure form attached.

(\*) Include drum number if this waste pertains to a lab pack.

Profile Number	USEPA Hazardous Waste Code	Constituent	Concentration
		<input type="checkbox"/> Liquid wastes containing Nickel	134 mg/L
		<input type="checkbox"/> Liquid wastes containing Thallium	130 mg/L
		<input type="checkbox"/> Wastes containing HOC's*	
(*) HOC's as defined in 40 CFR 268 Appendix III.			

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at 40 CFR 268.42 (c) (2). I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

Container Number:

Generator Signature

Page 1



# Universal Treatment Standards Disclosure Form

Underlying constituents for D001\*\* (low TOC, non-CWA), D002 (non-CWA, D012-D017 (nonwastewater), D018-D043 (non-CWA), and F039 The Waste material referenced in Section B exceeds the treatment standards for the hazardous constituents marked below

☐ Check if none of the underlying hazardous constituents

Profile number: X110065

Constituent	NWW	WW	Constituent	NWW	WW	Constituent	NWW	WW
<input type="checkbox"/> Acenaphthylene	3.4	0.059	<input type="checkbox"/> Dichlorodifluoromethane	7.2	0.23	<input type="checkbox"/> 5-Nitro-o-toluidine	28	0.32
<input type="checkbox"/> Acenaphthene	3.4	0.059	<input type="checkbox"/> 1,1-Dichloroethane	6	0.059	<input type="checkbox"/> o-Nitrophenol	13	0.02
<input type="checkbox"/> Acetone	160	0.28	<input type="checkbox"/> 1,2-Dichloroethane	6	0.21	<input type="checkbox"/> p-Nitrophenol	29	0.12
<input type="checkbox"/> Acetonitrile	1.8	5.6	<input type="checkbox"/> 1,1-Dichloroethylene	6	0.025	<input type="checkbox"/> N-Nitrosodiethylamine	28	0.4
<input type="checkbox"/> Acetophenone	9.7	0.01	<input type="checkbox"/> trans-1,2-	30	0.054	<input type="checkbox"/> N-Nitrosodimethylamine	2.3	0.4
<input type="checkbox"/> 2-Acetylaminofluorene	140	0.059	<input type="checkbox"/> 2,4-Dichlorophenol	14	0.044	<input type="checkbox"/> N-Nitroso-di-n-butylamine	1.7	0.4
<input type="checkbox"/> Acrolein	NA	0.29	<input type="checkbox"/> 2,6-Dichlorophenol	14	0.044	<input type="checkbox"/> N-Nitrosomethylethylamine	2.3	0.4
<input type="checkbox"/> Acrylamide	23	19	<input type="checkbox"/> 1,2-Dichloropropane	18	0.85	<input type="checkbox"/> N-Nitrosomorpholine	2.3	0.4
<input type="checkbox"/> Acrylonitrile	84	0.24	<input type="checkbox"/> cis-1,3-	18	0.036	<input type="checkbox"/> N-Nitrosopiperidine	35	0.13
<input type="checkbox"/> Aldrin	0.066	0.021	<input type="checkbox"/> trans-1,3-Dichloropropylene	18	0.036	<input type="checkbox"/> N-Nitrosopyrrolidine	35	0.01
<input type="checkbox"/> 4-Aminodiphenyl	NA	0.13	<input type="checkbox"/> Dieldrin	0.13	0.017	<input type="checkbox"/> Parathion	4.6	0.01
<input type="checkbox"/> Aniline	14	0.81	<input type="checkbox"/> Diethyl phthalate	28	0.2	<input type="checkbox"/> Total PCBs (All Aroclors)	10	0.1
<input type="checkbox"/> Anthracene	3.4	0.059	<input type="checkbox"/> 2,4-Dimethyl phenol	14	0.036	<input type="checkbox"/> Pentachlorobenzene	10	0.05
<input type="checkbox"/> Aramite	NA	0.36	<input type="checkbox"/> Dimethyl phthalate	28	0.047	<input type="checkbox"/> PeCDDs (All PeCDDs)	0.001	0.00
<input type="checkbox"/> alpha-BHC	0.066	0.0014	<input type="checkbox"/> Di-n-butyl phthalate	28	0.057	<input type="checkbox"/> PeCDFs (All PeCDFs)	0.001	0.00
<input type="checkbox"/> beta-BHC	0.066	0.0014	<input type="checkbox"/> 1,4-Dinitrobenzene	2.3	0.32	<input type="checkbox"/> Pentachloroethane	6	0.05
<input type="checkbox"/> delta-BHC	0.066	0.023	<input type="checkbox"/> 4,6-Dinitro-o-cresol	160	0.28	<input type="checkbox"/> Pentachloronitrobenzene	4.8	0.05
<input type="checkbox"/> gamma-BHC	0.066	0.0017	<input type="checkbox"/> 2,4-Dinitrophenol	160	0.12	<input type="checkbox"/> Pentachlorophenol	7.4	0.08
<input type="checkbox"/> Benzene	10	0.14	<input type="checkbox"/> 2,4-Dinitrotoluene	140	0.32	<input type="checkbox"/> Phenacetin	16	0.08
<input type="checkbox"/> Benz(a)anthracene	3.4	0.059	<input type="checkbox"/> 2,6-Dinitrotoluene	28	0.55	<input type="checkbox"/> Phenanthrene	5.6	0.05
<input type="checkbox"/> Benzal chloride	6	0.055	<input type="checkbox"/> Di-n-octyl phthalate	28	0.017	<input type="checkbox"/> Phenol	6.2	0.03
<input type="checkbox"/> Benzo(b)fluoranthene	6.8	0.11	<input type="checkbox"/> p-Dimethylaminoazobenzene	NA	0.13	<input type="checkbox"/> Phorate	4.6	0.02
<input type="checkbox"/> Benzo(k)fluoranthene	6.8	0.11	<input type="checkbox"/> Di-n-propylnitrosamine	14	0.4	<input type="checkbox"/> Phthalic acid	28	0.05
<input type="checkbox"/> Benzo(g,h,i)perylene	1.8	0.0055	<input type="checkbox"/> 1,4-Dioxane	170	NA	<input type="checkbox"/> Phthalic anhydride	28	0.05
<input type="checkbox"/> Benzo(a)pyrene	3.4	0.061	<input type="checkbox"/> Diphenylamine	13	0.92	<input type="checkbox"/> Pronamide	1.5	0.09
<input type="checkbox"/> Bromodichloromethane	15	0.35	<input type="checkbox"/> Diphenylnitrosamine	13	0.92	<input type="checkbox"/> Pyrene	0.2	0.06
<input type="checkbox"/> Methyl bromide	15	0.11	<input type="checkbox"/> 1,2-Diphenylhydrazine	NA	0.087	<input type="checkbox"/> Pyridine	1.6	0.01
<input type="checkbox"/> 4-Bromophenyl phenyl ether	15	0.55	<input type="checkbox"/> Disulfoton	6.2	0.017	<input type="checkbox"/> Saffrole	22	0.08
<input type="checkbox"/> n-Butyl alcohol	2.6	5.6	<input type="checkbox"/> Endosulfan I	0.866	0.023	<input type="checkbox"/> Silvex (2,4,5-TP)	7.9	0.72
<input type="checkbox"/> Butyl benzyl phthalate	28	0.017	<input type="checkbox"/> Endosulfan II	0.13	0.029	<input type="checkbox"/> 2,4,5-T (2,4,5-Trichlorophenol-oxyacetic acid)	7.9	0.72
<input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	2.5	0.066	<input type="checkbox"/> Endosulfan sulfate	0.13	0.029	<input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene	14	0.05
<input type="checkbox"/> Carbon disulfide	4.0 mg/l TCLP	3.8	<input type="checkbox"/> Endrin	0.13	0.0028	<input type="checkbox"/> TCDDs (All TCDDs)	0.001	0.00
<input type="checkbox"/> Carbon tetrachloride	6	0.057	<input type="checkbox"/> Endrin aldehyde	0.13	0.025	<input type="checkbox"/> TCDFs (All TCDFs)	0.001	0.00
<input type="checkbox"/> Chlordane (alpha and gamma isomers)	0.26	0.0033	<input type="checkbox"/> Ethyl acetate	33	0.34	<input type="checkbox"/> 1,1,1,2-Tetrachloroethane	6	0.05
<input type="checkbox"/> p-Chloroaniline	16	0.46	<input type="checkbox"/> Ethyl cyanide (Propanenitrile)	360	0.24	<input type="checkbox"/> 1,1,2,2-Tetrachloroethane	6	0.05
<input type="checkbox"/> Chlorobenzene	6	0.057	<input type="checkbox"/> Ethyl benzene	10	0.057	<input type="checkbox"/> Tetrachloroethylene	6	0.05
<input type="checkbox"/> Chlorobenzilate	NA	0.1	<input type="checkbox"/> Ethyl ether	160	0.12	<input type="checkbox"/> 2,3,4,6-Tetrachlorophenol	7.4	0.03
<input type="checkbox"/> 2-chloro-1,3-butadiene	0.28	0.057	<input type="checkbox"/> bis(2-Ethylhexyl)	28	0.28	<input type="checkbox"/> Toluene	10	0.08
<input type="checkbox"/> Chlorodibromomethane	15	0.057	<input type="checkbox"/> Ethyl methacrylate	160	0.14	<input type="checkbox"/> Toxaphene	2.6	0.00
<input type="checkbox"/> Chloroethane	6	0.27	<input type="checkbox"/> Ethylene oxide	NA	0.12	<input type="checkbox"/> Bromoform (Tribromomethane)	15	0.83
<input type="checkbox"/> bis(2-Chloroethoxy)methane	7.2	0.036	<input type="checkbox"/> Famphur	15	0.017	<input type="checkbox"/> 1,2,4-Trichlorobenzene	19	0.05
<input type="checkbox"/> bis(2-Chloroethyl)ether	6	0.033	<input type="checkbox"/> Fluoranthene	3.4	0.068	<input type="checkbox"/> 1,1,1-Trichloroethane	6	0.05
<input type="checkbox"/> Chloroform	6	0.046	<input type="checkbox"/> Fluorene	3.4	0.059	<input type="checkbox"/> 1,1,2-Trichloroethane	6	0.05
<input type="checkbox"/> bis(2-Chloroisopropyl)ether	7.2	0.055	<input type="checkbox"/> Heptachlor	0.066	0.0012	<input type="checkbox"/> Trichloroethylene	6	0.05
<input type="checkbox"/> p-Chloro-m-cresol	14	0.018	<input type="checkbox"/> Heptachlor epoxide	0.066	0.016	<input type="checkbox"/> Trichloromonofluoromethane	30	0.82
<input type="checkbox"/> 2-Chloroethyl vinyl ether	NA	0.062	<input type="checkbox"/> Hexachlorobenzene	10	0.055	<input type="checkbox"/> 2,4,5-Trichlorophenol	7.4	0.18
<input type="checkbox"/> Chlomethane (Methyl chloride)	30	0.19	<input type="checkbox"/> Hexachlorobutadiene	5.6	0.055	<input type="checkbox"/> 2,4,6-Trichlorophenol	7.4	0.03
<input type="checkbox"/> 2-Chloronaphthalene	5.6	0.055	<input type="checkbox"/> Hexachlorocyclopentadiene	2.4	0.057	<input type="checkbox"/> 1,2,3-Trichloropropane	38	0.85
<input type="checkbox"/> 2-Chlorophenol	5.7	0.044	<input type="checkbox"/> HxCDDs (All HxCDDs)	0.001	0.00063	<input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane	38	0.05
<input type="checkbox"/> 3-Chloropropylene	30	0.036	<input type="checkbox"/> HxCDFs (All HxCDFs)	0.001	0.00063	<input type="checkbox"/> Ins-(2,3-dibromopropyl)phosphate	0.1	0.11
<input type="checkbox"/> Chrysene	3.4	0.059	<input type="checkbox"/> Hexachloroethane	36	0.055	<input type="checkbox"/> Vinyl chloride	6	0.27
<input type="checkbox"/> o-Cresol	5.6	0.11	<input type="checkbox"/> Hexachloropropylene	30	0.035	<input type="checkbox"/> Xylenes-all mixed isomers	30	0.22
<input type="checkbox"/> m-Cresol	5.6	0.77	<input type="checkbox"/> Indeno(1,2,3-c,d)pyrene	3.4	0.0055	<input type="checkbox"/> Antimony	1.9	
<input type="checkbox"/> p-Cresol	5.6	0.77	<input type="checkbox"/> Iodomethane	65	0.19	<input type="checkbox"/> Arsenic	5.0 mg/l TCLP	1.4
<input type="checkbox"/> Cyclohexanone	0.75 mg/l TCLP	0.36	<input type="checkbox"/> Isobutyl alcohol	170	5.6	<input type="checkbox"/> Barium	7.6 mg/l TCLP	1.2
<input type="checkbox"/> 1,2-dibromo-3-chloropropane	15	0.11	<input type="checkbox"/> Isodrin	0.066	0.021	<input type="checkbox"/> Beryllium	0.14 mg/l TCLP	0.82
<input type="checkbox"/> Ethylene dibromide (1,2-Dibromoethane)	15	0.028	<input type="checkbox"/> Kepone	0.13	0.0011	<input type="checkbox"/> Cadmium	0.19 mg/l TCLP	0.69
<input type="checkbox"/> Dibromomethane	15	0.11	<input type="checkbox"/> Methacrylonitrile	84	0.24	<input type="checkbox"/> Chromium (Total)	0.86 mg/l TCLP	2.77
<input type="checkbox"/> 2,4-D (2,4-Dichlorophenoxyacetic acid)	10	0.72	<input type="checkbox"/> Methanol .75 mg/l TCLP	5.06		<input type="checkbox"/> Cyanides (Total)*	590	1.2
<input type="checkbox"/> o,p-DDD	0.087	0.023	<input type="checkbox"/> Methapyrene	1.5	0.081	<input type="checkbox"/> Cyanides (Amenable)*	30	0.06
<input type="checkbox"/> p,p-DDD	0.087	0.023	<input type="checkbox"/> Methoxychlor	0.18	0.25	<input type="checkbox"/> Fluvone	NA	35
<input type="checkbox"/> o,p-DDT	0.087	0.031	<input type="checkbox"/> 3-Methylcholanthrene	15	0.0055	<input type="checkbox"/> Lead	0.37 mg/l TCLP	0.69
<input type="checkbox"/> p,p-DDT	0.087	0.031	<input type="checkbox"/> 4,4-Methylene bis (2-chloroaniline)	30	0.5	<input type="checkbox"/> Mercury-non wastewater from Retort	0.20 mg/l TCLP	NA
<input type="checkbox"/> c,p-DDT	0.087	0.0039	<input type="checkbox"/> Methylene chloride	30	0.089	<input type="checkbox"/> Mercury-All Others	0.25 mg/l TCLP	0.15
<input type="checkbox"/> p,p'-DDT	0.087	0.0039	<input type="checkbox"/> Methyl ethyl ketone	36	0.28	<input type="checkbox"/> Nickel	5.0 mg/l TCLP	3.98
<input type="checkbox"/> Dibenz(a,h)anthracene	0.2	0.055	<input type="checkbox"/> Methyl isobutyl ketone	33	0.14	<input type="checkbox"/> Selenium	0.16 mg/l TCLP	0.82
<input type="checkbox"/> Dibenz(a,e)pyrene	NA	0.061	<input type="checkbox"/> Methyl methacrylate	160	0.14	<input type="checkbox"/> Silver	0.30 mg/l TCLP	0.43
<input type="checkbox"/> m-Dichlorobenzene	6	0.36	<input type="checkbox"/> Methyl	NA	0.018	<input type="checkbox"/> Sulfide	NA	14
<input type="checkbox"/> o-Dichlorobenzene	6	0.088	<input type="checkbox"/> Methyl parathion	4.6	0.014	<input type="checkbox"/> Thallium	0.70 mg/l TCLP	1.4
<input type="checkbox"/> p-Dichlorobenzene	6	0.09	<input type="checkbox"/> Naphthalene	5.6	0.059	<input type="checkbox"/> Vanadium	0.23 mg/l TCLP	4.3
			<input type="checkbox"/> 2-Naphthylamine	NA	0.52	<input type="checkbox"/> Zinc	5.3 mg/l TCLP	2.61
			<input type="checkbox"/> o-Nitroaniline	14	0.27			
			<input type="checkbox"/> p-Nitroaniline	28	0.028			
			<input type="checkbox"/> Nitrobenzene	14	0.068			

(\*) Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using SW-846 Method 9010 or 9012 with a sample size 10 grams and a distillation time of one hour and 15 minutes.

(\*\*) The selection of D001 constituents is only required for low TOC ignitable liquids managed in non-CWA facilities.

# Bill Payment Stub

Check Date: 6/1/2016

Check No.: 48124

Check Amount: 884.80

Stello Products, Inc.  
P.O. Box 89  
840 West Hillside Ave.  
Spencer, IN 47460

Paid To: Liquid Waste Removal, Inc.  
P.O. Box 795  
Greenwood, In 46142

Date	Type	Reference	Original Amt.	Balance	Discount	Payment
6/1/2016	Bill	21709	884.80	884.80		884.80

LIQUID WASTE REMOVAL INC  
500 S POLK ST SUITE 100  
PO BOX 795  
GREENWOOD IN 46142  
317-881-9754

# Invoice

Date	Invoice #
2/8/2016	21709

Bill To
STELLO PRODUCTS INC 840 WEST HILLSIDE AVE SPENCER, IN 47460

Ship To

P.O. No.	Terms	Due Date	Rep
	Net 30	3/9/2016	

Description	Rate	Quantity	Unit	Total
DISPOSAL OF WASTE TO EEI	884.80			884.80

Thank you; we really appreciate your business. Please send payment within the terms indicated on this invoice. There will be a 1.5% service charge per month on all late invoices.

<b>Subtotal</b>	\$884.80
<b>Sales Tax</b>	\$0.00
<b>Payments/Credits</b>	\$0.00
<b>Balance Due</b>	\$884.80

# Environmental Enterprises Incorporated

TREATMENT FACILITY  
4650 Spring Grove Ave.  
Cincinnati, Ohio 45232  
(513) 541-1823  
Fax: (513) 541-1638  
<http://www.eeenv.com>  
EPA ID#: OHD 083377010



CORPORATE OFFICE  
10163 Cincinnati-Dayton Rd.  
Cincinnati, Ohio 45241  
13) 772-2818  
Fax: (513) 782-8950  
(800) 722-2818

## CERTIFICATE OF TREATMENT, DISPOSAL & DESTRUCTION

I certify, to the best of my knowledge, the waste material described on the manifest listed below was received at Environmental Enterprises, Inc. and this material has been treated and destroyed or disposed of in accordance with all applicable federal, state, and local regulations.

**Generator**

Stello Products, Inc.  
840 West Hillside Avenue  
Spencer, IN 47460

**Manifest Document #**

014772513 JJK

**Date Received**

02/10/16

**Certified by:**

**ENVIRONMENTAL ENTERPRISES, INC.**

*Warren G. Taylor*

Warren G. Taylor,  
Director of Quality Assurance  
4/15/16

# Environmental Enterprises Incorporated

Treatment Facility  
4650 Spring Grove Ave.  
Cincinnati, Ohio 45232  
(513) 541-1823  
Fax (513) 541-1638  
EPA ID#: OHD083377010



Corporate Office  
10163 Cincinnati – Dayton Rd.  
Cincinnati, Ohio 45241  
(513) 772-2818  
Fax: (513) 782-8950  
(800) 722-2818

## Manifest Discrepancy & Profile Variance Report

Date of Discrepancy 9/2/2016 Profile No.: X110065 Manifest No.: 14771013JJK Manifest Line: 1  
Date Receive 8/3/2016 Description: CHROMIC ACID / NITRIC ACID  
Generator: Stello Products Contact: Mrs. Ambur Summerlot  
Address: 840 West Hillside Avenue Spencer IN 47460  
Customer Name Liquid Waste Removal, Inc. Contact: Mr. Gary Bush Phone: (317) 881-9754  
Transporter: LIQUID WASTE REMOVAL

### Discrepancy Details

☐ Container Number/Total Quantity Discrepancy

No. Containers Manifested:

No. Containers Received:

Total Quantity Manifested

Total Quantity Receive

☒ Waste Shipped Does Not Match Waste Received (Describe Discrepancy

RECEIVED A SODIUM HYDROXIDE SOLUTION

Corrective Action Taken: MOVED FROM PROFILE X110065 TO X110609: UN3266 CORROSIVE LIQUID BASIC NOS (SODIUM HYDROXIDE) 8, PGII.

Company Contacted

Person Contacted

Contacted By

Phone: (513) 541-1823 Resolution Date

### Generator Acceptance

Environmental Enterprises Inc. (EEI) considers this discrepancy to be resolved. Within 14 days from the discrepancy date please sign and return this form to EEI confirming that you agree with the changes, or notify EEI that you do not agree. We must notify the EPA within 15 days of any unresolved discrepancy.

Generator Authorized Signature

Printed Name

Company

Date

Waste Code Variance As Profiled

Manifested

Changes To Manifest:

Changes To Profile

# of Containers with Variance 16-29548 1X55

**Tolerance Range Variance** EEI visually inspected and/or tested the waste received in accordance with its Waste Analysis Plan. Significant variances between waste profiled and waste received and their corresponding resolutions are outlined below.

Parameter NA

As Profiled

As Received

# Containers with variance

Corrective Action:

If you do not agree with the changes indicated above please contact EEI within 3 business days of the discrepancy date.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number		2. Page 1 of		3. Emergency Response Phone		4. Manifest Tracking Number		<b>JJK</b>	
5. Generator's Name and Mailing Address										Generator's Site Address (if different than mailing address)	
Generator's Phone:											
6. Transporter 1 Company Name										U.S. EPA ID Number	
7. Transporter 2 Company Name										U.S. EPA ID Number	
8. Designated Facility Name and Site Address										U.S. EPA ID Number	
Facility's Phone:											
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
						No.	Type				
	1										
	2										
	3										
	4										
14. Special Handling Instructions and Additional Information											
15. <b>GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offor's Printed/Typed Name										Signature	Month Day Year
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit _____ Date leaving U.S.: _____										
	Transporter signature (for exports only): _____										
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials										
	Transporter 1 Printed/Typed Name					Signature					Month Day Year
	Transporter 2 Printed/Typed Name					Signature					Month Day Year
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection										
	Manifest Reference Number:										
	18b. Alternate Facility (or Generator) U.S. EPA ID Number										
	Facility's Phone:										
	18c. Signature of Alternate Facility (or Generator) Month Day Year										
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
	1.	2.	3.	4.							
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a											
Printed/Typed Name										Signature	Month Day Year

# Bill Payment Stub

Check Date: 7/10/2013

Check No.: 44960

Check Amount: 117.60

Stello Products, Inc.  
P.O. Box 89  
840 West Hillside Ave.  
Spencer, IN 47460

Paid To: Liquid Waste Removal, Inc.  
P.O. Box 795  
Greenwood, In 46142

Date	Type	Reference	Original Amt.	Balance	Discount	Payment
6/22/2013	Bill	6191	117.60	117.60		117.60



must be legibly lined in, in ink indelible pencil, or in Carbon, and retained by the agent.

Carrier No. 1-876543210

Date \_\_\_\_\_

Page 1 of 1

Liquid Waste Removal, Incorporated

(Name of carrier)

(SCAC)

1 on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430. Sec 1

TU:

Consignee TWNY BRIDGES RDF

Street 124 TWIN BRIDGES ROAD

City DANVILLE State IN Zip Code 46122

FROM:

Shipper STELLO PRODUCTS INC.

Street 840 WEST HILLSIDE AVE

City SPENCER State IN Zip Code 47355

Chemrec Code L1WR 1-800-429-936

24 hr. Emergency Contact Tel. No. \_\_\_\_\_

Vehicle  
Number

Route

[illegible]PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be \$\_\_\_\_\_."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(a) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled, placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

 Signature

REMIT  
C.O.D. TO  
ADDRESS

COD

Am: \$

COD FEE:  
PREPAID ☐  
COLLECT ☐

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES

**FREIGHT PREPAID**  
except when box at  
right is checked

Check box if charges are to be collected

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over and over any portion of said route to de-

lination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification or the date of shipment;

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

PER STELLCO PRODUCTS INC.

CARRIER

Liquid Waste Removal, Incorporated

PER

DATE \_\_\_\_\_

Permanent post-office address of shipper



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## LIQUID WASTE REMOVAL INC

500 S POLK ST SUITE 100

PO BOX 795

GREENWOOD, IN 46142

**Invoice**

Date	Invoice #
3/20/2012	81609

Bill To
STELLO PRODUCTS INC 840 WEST HILLSIDE AVE SPENCER, IN 47460

Ship To

P.O. No.	Terms	Due Date	Rep
	Net 30	4/19/2012	

Description	Rate	Quantity	Unit	Total
DISPOSAL OF WASTE FLAMMABLES	319.20			319.20
<div>PAID APR 16 2012 STELLO PRODUCTS, INC. CK# 433410</div>				

We appreciate your prompt payment.

<b>Subtotal</b>	\$319.20
<b>Sales Tax (7.0%)</b>	\$0.00
<b>Total</b>	\$319.20



**LVR  
WASTE REMOVAL**

81609

INVOICE COPY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number	
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Generator's Phone:		U.S. EPA ID Number				
6. Transporter 1 Company Name		U.S. EPA ID Number				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
Facility's Phone:		U.S. EPA ID Number				
9a. HMT	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
	1.			150		
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offlor's Printed/Typed Name		Signature		Month	Day	Year
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit:		Date leaving U.S.:		
Transporter signature (for exports only):						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
18. Discrepancy						
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
18b. Alternate Facility (or Generator) U.S. EPA ID Number						
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1. 11050 2. 3. 4.						
20. Designated Facility Owner or Operator Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature		Month	Day	Year



**Essroc**  
Italcementi Group  
Logansport, IN 46947

# *Certificate of Thermal Destruction*

EPA ID# : INR000103655  
Generator : STELLO PRODUCTS  
Address : P.O. BOX 89  
840 WEST HILLSIDE AVENUE  
SPENCER, IN, USA 47450  
Contact : JOHN

Gentlemen :                      Essroc Cement Corp. (IND005081542) has processed waste from:  
STELLO PRODUCTS

As indicated on Manifest  
009251087JJJ

And hereby certifies that this waste was Thermally Destroyed at:  
ESSROC's TSD Facility (IND 005 081 542)  
Logansport, Indiana

Between  
3/16/2012 and 3/17/2012  
In the Amount of 1,185 lbs (150 gallons)

Date Load Received: 3/16/2012

Essroc Load Record Number: 20-58967

Environmental Manager  
3/18/2012  
Date

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number		2. Page 1 of	3. Emergency Response Phone		4. Manifest Tracking Number <b>009251087 JJK</b>	
		5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
GENERATOR		Generator's Phone:						
		6. Transporter 1 Company Name		U.S. EPA ID Number				
TRANSPORTER		7. Transporter 2 Company Name		U.S. EPA ID Number				
		8. Designated Facility Name and Site Address		U.S. EPA ID Number				
DESIGNATED FACILITY		Facility's Phone:						
		9a. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		1		No.	Type	150		
		2						
		3						
		4						
		14. Special Handling Instructions and Additional Information						
		15. <b>GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
		Generator's/Offor's Printed/Typed Name		Signature		Month Day Year		
		16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____				
		17. Transporter Acknowledgment of Receipt of Materials						
		Transporter 1 Printed/Typed Name		Signature		Month Day Year		
		Transporter 2 Printed/Typed Name		Signature		Month Day Year		
		18. Discrepancy						
		18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
		Manifest Reference Number:						
		18b. Alternate Facility (or Generator)		U.S. EPA ID Number				
		Facility's Phone:						
		18c. Signature of Alternate Facility (or Generator)		Month Day Year				
		19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
		1		2		3		4
		20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
		Printed/Typed Name		Signature		Month Day Year		



**LWR**  
**WASTE REMOVAL**

81639

CUSTOMER COPY

**ESSROC CEMENT CORPORATION**  
LAND DISPOSAL RESTRICTION (LDR) AND NOTIFICATION FORM

A. Generator Name STELLO PRODUCTS, INC. US EPA ID # INR000103655  
Address 840 WEST HILLSIDE AVENUE Manifest # 009251087 JJK  
SPENCER, IN 47460 Profile #(s) L000887

B. ☒ (Check if applicable)

Restricted Waste contained in this shipment and referenced by the above manifest number that are listed below are subject to the treatment standards set forth in 40 CFR 268.40. For each waste code, list the corresponding Subcategory, if applicable. Record an "X" in the appropriate column below for Treatability Group and each disclosure form attached.

(1) Profile Number	(2) USEPA Hazardous Waste Code	(3) Subcategory (if applicable)	(4) Treatability group*		(5) F001-F005 Disclosure Form Attached	(6) UTS Disclosure Form Attached	(7) Lab Pack 40 CFR 268 App. IV
			NW	WW			
L000887	D001	IGNITABLE LIQ. HIGH TOC	X				
"	F003	XYLENE	X		X		
"	F005	TOLUENE	X		X		
"	D035	METHYL ETHYL KETONE - NON CWA	X			X	

(\*) Include drum number if this waste pertains to a lab pack.

C. California List Constituents and their Prohibition Levels

Profile Number	USEPA Hazardous Waste Code	Constituent	Concentration
<u>                    </u>	<u>                    </u>	<input type="checkbox"/> Liquid wastes containing Nickel	134 mg/L
<u>                    </u>	<u>                    </u>	<input type="checkbox"/> Liquid wastes containing Thallium	130 mg/L
<u>L000887</u>	<u>F003, F005</u>	<input checked="" type="checkbox"/> Wastes containing HOC's*	
(*) HOC's as defined in 40 CFR 268 Appendix III.			

D. LAB PACK CERTIFICATION: If your waste is packaged in lab packs and does not contain any waste codes in Appendix IV (see list below), the following certifications must be completed and the corresponding container numbers must be listed also. If the waste is packaged in lab packs and they include waste codes in Appendix IV, then table B (page 2) must be completed for those containers and the respective waste codes.

APPENDIX IV codes: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at 40 CFR 268.42 (c) (2). I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

\_\_\_\_\_  
Generator Signature

\_\_\_\_\_  
Date

Container Number: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

E. Notification Statement: This waste must be treated to the applicable treatment standards set forth in 40 CFR 268 Subpart D, Section 268.32, or RCRA Section 3004 (d). Waste analysis is attached where available, otherwise the information herein is based upon my thorough knowledge of the waste(s). I hereby certify that the information provided is complete and accurate based on my knowledge of the materials.

*John Sumner*  
Generator Signature

3-15-12  
Date



**ESSROC CEMENT CORPORATION (LDR Continued)**  
**Universal Treatment Standards Disclosure Form**

Underlying constituents for D001\*\* (low TOC, non-CWA), D002 (non-CWA, D012-D017 (nonwastewater), D018-D043 (non-CWA), and F039. The Waste material referenced in Section B exceeds the treatment standards for the hazardous constituents marked below

☐ Check if none of the underlying hazardous constituents

Profile number: L000887

Constituent	NWW	WW	Constituent	NWW	WW	Constituent	NWW	WW
<input type="checkbox"/> Acenaphthylene	3.4	0.059	<input type="checkbox"/> Dichlorodifluoromethane	7.2	0.23	<input type="checkbox"/> 5-Nitro-o-toluidine	28	0.32
<input type="checkbox"/> Acenaphthene	3.4	0.059	<input type="checkbox"/> 1,1-Dichloroethane	6	0.059	<input type="checkbox"/> o-Nitrophenol	13	0.28
<input type="checkbox"/> Acetone	160	0.28	<input type="checkbox"/> 1,2-Dichloroethane	6	0.21	<input type="checkbox"/> p-Nitrophenol	29	0.12
<input type="checkbox"/> Acetonitrile	1.8	5.6	<input type="checkbox"/> 1,1-Dichloroethylene	6	0.025	<input type="checkbox"/> N-Nitrosodimethylamine	28	0.4
<input type="checkbox"/> Acetophenone	9.7	0.01	<input type="checkbox"/> trans-1,2-	30	0.054	<input type="checkbox"/> N-Nitrosodimethylamine	2.3	0.4
<input type="checkbox"/> 2-Acetylaminofluorene	140	0.059	<input type="checkbox"/> 2,4-Dichlorophenol	14	0.044	<input type="checkbox"/> N-Nitroso-di-n-butylamine	17	0.4
<input type="checkbox"/> Acrolein	NA	0.29	<input type="checkbox"/> 2,6-Dichlorophenol	14	0.044	<input type="checkbox"/> N-Nitrosomethylethylamine	2.3	0.4
<input type="checkbox"/> Acrylamide	23	19	<input type="checkbox"/> 1,2-Dichloropropane	18	0.85	<input type="checkbox"/> N-Nitrosomorpholine	2.3	0.4
<input type="checkbox"/> Acrylonitrile	84	0.24	<input type="checkbox"/> cis-1,3-	18	0.036	<input type="checkbox"/> N-Nitrosopiperidine	35	0.13
<input type="checkbox"/> Aldrin	0.066	0.021	<input type="checkbox"/> trans-1,3-Dichloropropylene	18	0.036	<input type="checkbox"/> N-Nitrosopyrrolidine	35	0.13
<input type="checkbox"/> 4-Aminodiphenyl	NA	0.13	<input type="checkbox"/> Dieldrin	0.13	0.017	<input type="checkbox"/> Parathion	4.6	0.14
<input type="checkbox"/> Aniline	14	0.81	<input type="checkbox"/> Diethyl phthalate	28	0.2	<input type="checkbox"/> Total PCBs (All Aroclors)	10	0.1
<input type="checkbox"/> Anthracene	3.4	0.059	<input type="checkbox"/> 2,4-Dimethyl phenol	14	0.036	<input type="checkbox"/> Pentachlorobenzene	10	0.55
<input type="checkbox"/> Aramite	NA	0.36	<input type="checkbox"/> Dimethyl phthalate	28	0.047	<input type="checkbox"/> PeCDDs (All PeCDDs)	0.001	0.00
<input type="checkbox"/> alpha-BHC	0.066	0.00014	<input type="checkbox"/> Di-n-butyl phthalate	28	0.057	<input type="checkbox"/> PeCDFs (All PeCDFs)	0.001	0.00
<input type="checkbox"/> beta-BHC	0.066	0.00014	<input type="checkbox"/> 1,4-Dinitrobenzene	2.3	0.32	<input type="checkbox"/> Pentachloroethane	6	0.05
<input type="checkbox"/> delta-BHC	0.066	0.023	<input type="checkbox"/> 4,6-Dinitro-o-cresol	160	0.28	<input type="checkbox"/> Pentachloronitrobenzene	4.8	0.05
<input type="checkbox"/> gamma-BHC	0.066	0.0017	<input type="checkbox"/> 2,4-Dinitrophenol	160	0.12	<input type="checkbox"/> Pentachlorophenol	7.4	0.08
<input type="checkbox"/> Benzene	10	0.14	<input type="checkbox"/> 2,6-Dinitrotoluene	140	0.32	<input type="checkbox"/> Phenacetin	16	0.08
<input type="checkbox"/> Benz(a)anthracene	3.4	0.059	<input type="checkbox"/> 2,6-Dinitrotoluene	28	0.55	<input type="checkbox"/> Phenanthrene	5.6	0.05
<input type="checkbox"/> Benzal chloride	6	0.055	<input type="checkbox"/> Di-n-octyl phthalate	28	0.017	<input type="checkbox"/> Phenol	6.2	0.03
<input type="checkbox"/> Benzo(b)fluoranthene	6.8	0.11	<input type="checkbox"/> p-Dimethylaminoazobenzene	NA	0.13	<input type="checkbox"/> Phorate	4.6	0.02
<input type="checkbox"/> Benzo(k)fluoranthene	6.8	0.11	<input type="checkbox"/> Di-n-propylnitrosamine	14	0.4	<input type="checkbox"/> Phthalic acid	28	0.05
<input type="checkbox"/> Benzo(g,h,i)perylene	1.8	0.055	<input type="checkbox"/> 1,4-Dioxane	170	NA	<input type="checkbox"/> Phthalic anhydride	28	0.05
<input type="checkbox"/> Benzo(a)pyrene	3.4	0.061	<input type="checkbox"/> Diphenylamine	13	0.92	<input type="checkbox"/> Pronamide	1.5	0.09
<input type="checkbox"/> Bromodichloromethane	15	0.35	<input type="checkbox"/> Diphenylnitrosamine	13	0.92	<input type="checkbox"/> Pyrene	0.2	0.06
<input type="checkbox"/> Methyl bromide	15	0.11	<input type="checkbox"/> 1,2-Diphenylhydrazine	NA	0.087	<input type="checkbox"/> Pyridine	1.6	0.01
<input type="checkbox"/> (Bromomethane)			<input type="checkbox"/> Disulfoton	6.2	0.017	<input type="checkbox"/> Salfrole	22	0.08
<input type="checkbox"/> 4-Bromophenyl phenyl ether	15	0.55	<input type="checkbox"/> Endosulfan I	0.866	0.023	<input type="checkbox"/> Silvex (2,4,5-IP)	7.9	0.72
<input type="checkbox"/> n-Butyl alcohol	2.6	5.6	<input type="checkbox"/> Endosulfan II	0.13	0.029	<input type="checkbox"/> 2,4,5-IP (2,4,5-Trichlorophen-oxyacetic acid)	7.9	0.72
<input type="checkbox"/> Butyl benzyl phthalate	28	0.017	<input type="checkbox"/> Endosulfan sulfate	0.13	0.029	<input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene	14	0.05
<input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	2.5	0.066	<input type="checkbox"/> Endrin	0.13	0.0028	<input type="checkbox"/> TCDDs (All TCDDs)	0.001	0.00
<input type="checkbox"/> Carbon disulfide	4.0 mg/l TCLP	3.8	<input type="checkbox"/> Endrin aldehyde	0.13	0.025	<input type="checkbox"/> TCDFs (All TCDFs)	0.001	0.00
<input type="checkbox"/> Carbon tetrachloride	6	0.057	<input type="checkbox"/> Ethyl acetate	33	0.34	<input type="checkbox"/> 1,1,1,2-Tetrachloroethane	6	0.05
<input type="checkbox"/> Chlordane (alpha and gamma isomers)	0.26	0.0033	<input type="checkbox"/> Ethyl cyanide (Propane-nitrile)	360	0.24	<input type="checkbox"/> 1,1,2,2-Tetrachloroethane	6	0.05
<input type="checkbox"/> p-Chloroaniline	16	0.46	<input type="checkbox"/> Ethyl benzene	10	0.057	<input type="checkbox"/> Tetrachloroethylene	6	0.05
<input type="checkbox"/> Chlorobenzene	6	0.057	<input type="checkbox"/> Ethyl ether	160	0.12	<input type="checkbox"/> 2,3,4,6-Tetrachlorophenol	7.4	0.03
<input type="checkbox"/> Chlorobenzilate	NA	0.1	<input type="checkbox"/> bis(2-Ethylhexyl)	28	0.28	<input type="checkbox"/> Toluene	10	0.08
<input type="checkbox"/> 2-chloro-1,3-butadiene	0.28	0.057	<input type="checkbox"/> Ethyl methacrylate	160	0.14	<input type="checkbox"/> Toxaphene	2.6	0.00
<input type="checkbox"/> Chlorodibromomethane	15	0.057	<input type="checkbox"/> Ethylene oxide	NA	0.12	<input type="checkbox"/> Bromoform (Tri bromomethane)	15	0.63
<input type="checkbox"/> Chloroethane	6	0.27	<input type="checkbox"/> Fampur	15	0.017	<input type="checkbox"/> 1,2,4-Trichlorobenzene	19	0.05
<input type="checkbox"/> bis(2-Chloroethoxy)-methane	7.2	0.036	<input type="checkbox"/> Fluoranthene	3.4	0.068	<input type="checkbox"/> 1,1,1-Trichloroethane	6	0.05
<input type="checkbox"/> bis(2-Chloroethyl)ether	6	0.033	<input type="checkbox"/> Fluorene	3.4	0.059	<input type="checkbox"/> 1,1,2-Trichloroethane	6	0.05
<input type="checkbox"/> Chloroform	6	0.046	<input type="checkbox"/> Heptachlor	0.066	0.0012	<input type="checkbox"/> Trichloroethylene	6	0.05
<input type="checkbox"/> bis(2-Chloroisopropyl)-ether	7.2	0.055	<input type="checkbox"/> Heptachlor epoxide	0.066	0.016	<input type="checkbox"/> Trichloromonofluoromethane	30	0.82
<input type="checkbox"/> p-Chloro-m-cresol	14	0.018	<input type="checkbox"/> Hexachlorobenzene	10	0.055	<input type="checkbox"/> 2,4,5-Trichlorophenol	7.4	0.18
<input type="checkbox"/> 2-Chloroethyl vinyl ether	NA	0.062	<input type="checkbox"/> Hexachlorobutadiene	5.6	0.055	<input type="checkbox"/> 2,4,6-Trichlorophenol	7.4	0.03
<input type="checkbox"/> Chloromethane	30	0.19	<input type="checkbox"/> Hexachlorocyclopentadiene	2.4	0.057	<input type="checkbox"/> 1,2,3-Trichloropropane	38	0.85
<input type="checkbox"/> (Methyl chloride)			<input type="checkbox"/> HxCDDs (All HxCDDs)	0.001	0.00063	<input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane	38	0.05
<input type="checkbox"/> 2-Chloronaphthalene	5.6	0.055	<input type="checkbox"/> HxCDFs (All HxCDFs)	0.001	0.00063	<input type="checkbox"/> tris-(2,3-dibromopropyl) phosphate	0.1	0.11
<input type="checkbox"/> 2-Chlorophenol	5.7	0.044	<input type="checkbox"/> Hexachloroethane	36	0.055	<input type="checkbox"/> Vinyl chloride	6	0.27
<input type="checkbox"/> 3-Chloropropylene	30	0.036	<input type="checkbox"/> Hexachloropropylene	30	0.035	<input type="checkbox"/> Xylenes-all mixed isomers	30	0.22
<input type="checkbox"/> Chrysene	3.4	0.059	<input type="checkbox"/> Indeno(1,2,3-c,d)pyrene	3.4	0.0055	<input type="checkbox"/> Antimony		1.9
<input type="checkbox"/> o-Cresol	5.6	0.11	<input type="checkbox"/> Iodomethane	65	0.19	<input type="checkbox"/> Arsenic	5.0 mg/l TCLP	1.4
<input type="checkbox"/> m-Cresol	5.6	0.77	<input type="checkbox"/> Isobutyl alcohol	170	5.6	<input type="checkbox"/> Barium	7.6 mg/l TCLP	1.2
<input type="checkbox"/> p-Cresol	5.6	0.77	<input type="checkbox"/> Isodrin	0.066	0.021	<input type="checkbox"/> Beryllium	0.14 mg/l TCLP	0.82
<input type="checkbox"/> Cyclohexanone	0.75 mg/l TCLP	0.36	<input type="checkbox"/> Isosafrole	2.6	0.081	<input type="checkbox"/> Cadmium	0.19 mg/l TCLP	0.69
<input type="checkbox"/> 1,2-dibromo-3-chloropropane	15	0.11	<input type="checkbox"/> Kepone	0.13	0.0011	<input type="checkbox"/> Chromium (Total)	0.86 mg/l TCLP	2.77
<input type="checkbox"/> Ethylene dibromide (1,2-Dibromoethane)	15	0.028	<input type="checkbox"/> Methacrylonitrile	84	0.24	<input type="checkbox"/> Cyanides (Total)*	590	1.2
<input type="checkbox"/> Dibromomethane	15	0.11	<input type="checkbox"/> Methanol .75 mg/l	TCLP	5.06	<input type="checkbox"/> Cyanides (Amenable)*	30	0.06
<input type="checkbox"/> 2,4-D (2,4-Dichlorophenoxyacetic acid)	10	0.72	<input type="checkbox"/> Methapyrene	1.5	0.081	<input type="checkbox"/> Fluoride	NA	35
<input type="checkbox"/> o,p'-DDD	0.087	0.023	<input type="checkbox"/> Methoxychlor	0.18	0.25	<input type="checkbox"/> Lead	0.37 mg/l TCLP	0.69
<input type="checkbox"/> p,p'-DDD	0.087	0.023	<input type="checkbox"/> 3-Methylcholanthrene	15	0.0055	<input type="checkbox"/> Mercury-non wastewater from Retort	0.20 mg/l TCLP	NA
<input type="checkbox"/> o,p'-DDE	0.087	0.031	<input type="checkbox"/> 4,4-Methylene bis (2-chloroaniline)	30	0.5	<input type="checkbox"/> Mercury-All Others	0.25 mg/l TCLP	0.15
<input type="checkbox"/> p,p'-DDE	0.087	0.031	<input type="checkbox"/> Methylene chloride	30	0.089	<input type="checkbox"/> Nickel	5.0 mg/l TCLP	3.98
<input type="checkbox"/> c,p'-DDT	0.087	0.0039	<input type="checkbox"/> Methyl ethyl ketone	36	0.28	<input type="checkbox"/> Selenium	0.16 mg/l TCLP	0.82
<input type="checkbox"/> p,p'-DDT	0.087	0.0039	<input type="checkbox"/> Methyl isobutyl ketone	33	0.14	<input type="checkbox"/> Silver	0.30 mg/l TCLP	0.43
<input type="checkbox"/> Dibenz(a,h)anthracene	0.2	0.055	<input type="checkbox"/> Methyl methacrylate	160	0.14	<input type="checkbox"/> Sulfide	NA	14
<input type="checkbox"/> Dibenz(a,e)pyrene	NA	0.061	<input type="checkbox"/> Methyl	NA	0.018	<input type="checkbox"/> Thallium	0.70 mg/l TCLP	1.4
<input type="checkbox"/> m-Dichlorobenzene	6	0.36	<input type="checkbox"/> Methyl parathion	4.6	0.014	<input type="checkbox"/> Vanadium	0.23 mg/l TCLP	4.3
<input type="checkbox"/> o-Dichlorobenzene	6	0.088	<input type="checkbox"/> Naphthalene	5.6	0.059	<input type="checkbox"/> Zinc	5.3 mg/l TCLP	2.61
<input type="checkbox"/> p-Dichlorobenzene	6	0.09	<input type="checkbox"/> 2-Naphthylamine	NA	0.52			
			<input type="checkbox"/> o-Nitroaniline	14	0.27			
			<input type="checkbox"/> p-Nitroaniline	28	0.028			
			<input type="checkbox"/> Nitrobenzene	14	0.068			

(\*) Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using SW-846 Method 9010 or 9012 with a sample size 10 grams and a distillation time of 1 hour and 15 minutes.

(\*\*) The selection of D001 constituents is only required for low TOC ignitable liquids managed in non-CWA facilities.

# Bill Payment Stub

Check Date: 7/6/2011

Check No.: 42243

Check Amount: 319.20

Stello Products, Inc.  
P.O. Box 89  
840 West Hillside Ave.  
Spencer, IN 47460

Paid To: Liquid Waste Removal, Inc.  
P.O. Box 795  
Greenwood, In 46142

Date	Type	Reference	Original Amt.	Balance	Discount	Payment
6/7/2011	Bill	78604	319.20	319.20		319.20

**LIQUID WASTE REMOVAL, INC.**P.O. Box 795  
GREENWOOD, INDIANA 46142(317) 881-9754  
FAX (317) 889-0383**INVOICE**

INVOICE NO. INVOICE DATE

78604 05/26/11

SOLD  
TOSTELLO PRODUCTS INC  
840 WEST HILLSIDE AVENUE  
SPENCER, IN 47460STELLO PRODUCTS INC  
840 WEST HILLSIDE AVENUE  
SPENCER, IN 47460

PURCHASE ORDER NUMBER	DATE ORDERED	PAYMENT DATE	SALESPERSON
	05/26/11		KG
TERMS		NOTES	
Net 30			

REFERENCE	DESCRIPTION	AMOUNT
F	DISPOSAL OF WASTE FLAMMABLES  <b>PAID</b> <b>JUL 07 2011</b> STELLO PRODUCTS, INC. CK# <u>40243</u>	319.20

MESSAGE:

STELLOPR

We appreciate your business.

SUBTOTAL	319.20
SALES TAX	0.00
SHIPPING	0.00
TOTAL	319.20



**LIQUID WASTE REMOVAL, INC.**P O Box 795  
GREENWOOD, INDIANA 46142**INVOICE**

INVOICE NO. INVOICE DATE

(317) 881-9754  
FAX (317) 889-0383

78604 05/26/11

SOLD  
TO:STELLO PRODUCTS INC  
840 WEST HILLSIDE AVENUE  
SPENCER, IN 47460STELLO PRODUCTS INC  
840 WEST HILLSIDE AVENUE  
SPENCER, IN 47460

PURCHASE ORDER NUMBER	DATE ORDERED	PAYMENT DATE	SALESPERSON
	05/26/11		KG
TERMS	NOTES		
Net 30			

REFERENCE	DESCRIPTION	AMOUNT
F	DISPOSAL OF WASTE FLAMMABLES	319.20
	42243	

MESSAGE:

STELLOPR

We appreciate your business.

SUBTOTAL	319.20
	0.00
SALES TAX	0.00
SHIPPING	0.00
TOTAL	319.20

**LWR**  
**WASTE REMOVAL**

*Work Order/Invoice*  
78604

PO#:

**Job Location:**

STELLO PRODUCTS, INCORPORATED  
840 WEST HILLSIDE AVENUE  
SPENCER, IN 47460

*Bill To:*

STELLO PRODUCTS, INCORPORATED  
P.O. BOX 89  
SPENCER, IN 47460

**Contacts:** MR. TODD ZELLERS

**Phone:** (812) 829- 2246

*Comments:* PUMPING, TRANSPORTATION AND DISPOSAL OF WASTE PAINT RELATED MATERIAL TO ESSROC CEMENT CORPORATION, HAZARDOUS.; DRUM EXCHANGE:

<i>Time In:</i>	<input type="checkbox"/> AM <input type="checkbox"/> PM	<i>Time Out</i>
-----------------	--	-----------------

☐ AM *Truck* 

Dr. LC  
Init. LC

[illegible]

In the event Liquid Waste Removal, Inc. is required to employ an attorney to collect any balances due, I agree to pay all incurred collection costs, including agency and attorney fees and court costs.

*Grand Total:*

319.20

*Signature:*

10 James  
I hereby acknowledge the satisfactory completion of the above described work.

Date: 5/25/11

INVOICE COPY



**LWR**  
**WASTE REMOVAL**

PO#:

STELLO PRODUCTS, INCORPORATED  
P.O. BOX 89  
SPENCER, IN 47460

**Comments:** PUMPING, TRANSPORTATION AND DISPOSAL OF WASTE PAINT RELATED MATERIAL TO ENSROC CEMENT CORPORATION, HAZARDOUS, DRUM EXCHANGE.

Dr. 10  
Init.

*Total*

Energy/Security Recovery Fee

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

**Grand Total:**

Date: 1/5/11

CUSTOMER COPY

|  |  |  |  |              |  |                             |  |                             |                   |                 |
|--|--|--|--|--------------|--|-----------------------------|--|-----------------------------|-------------------|-----------------|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>      |  | 1. Generator ID Number   |  | 2. Page 1 of |  | 3. Emergency Response Phone |  | 4. Manifest Tracking Number |                   |                 |
|  |  |  |  |              |  |                             |  | JJK                         |                   |                 |
| 5. Generator's Name and Mailing Address      |  | Generator's Site Address (if different than mailing address)   |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| Generator's Phone                            |  | 6. Transporter 1 Company Name  |  |              |  |                             |  | U.S. EPA ID Number          |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| 7. Transporter 2 Company Name                |  |  |  |              |  |                             |  | U.S. EPA ID Number          |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| 8. Designated Facility Name and Site Address |  |  |  |              |  |                             |  | U.S. EPA ID Number          |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| Facility's Phone                             |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| 9a. HM                                       |  | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) |  |              |  | 10. Containers              |  | 11. Total Quantity          | 12. Unit Wt./Vol. | 13. Waste Codes |
|  |  |  |  |              |  | No.      Type               |  |                             |                   |                 |
| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
|  |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |
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| GENERATOR                                    |  |  |  |              |  |                             |  |                             |                   |                 |

Generator Name STELLO PRODUCTS, INC.  
Address 840 WEST HILLSIDE AVENUE  
SPENCER, IN 47460

|              |               |
|--------------|---------------|
| US EPA ID #  | INR000103655  |
| Manifest #   | 007719753 JJK |
| Profile #(s) | L000887       |

Restricted Waste contained in this shipment and referenced by the above manifest number that are listed below are subject to the treatment standards set forth in 40 CFR 268.40. For each waste code, list the corresponding Subcategory, if applicable. Record an "X" in the appropriate column below for Treatability Group and each disclosure form attached.

[illegible]

### California List Constituents and their Prohibition Levels

| Profile Number | USEPA Hazardous Waste Code | Constituent  | Concentration |
|----------------|----------------------------|--|---------------|
|                |                            | <input type="checkbox"/> Liquid wastes containing Nickel   | 134 mg/L      |
|                |                            | <input type="checkbox"/> Liquid wastes containing Thallium | 130 mg/L      |
| L000887        | F003, F005                 | X Wastes containing HOC's*                                 |               |
|                |                            | (*) HOC's as defined in 40 CFR 268 Appendix III.           |               |

D. LAB PACK CERTIFICATION: If your waste is packaged in lab packs and does not contain any waste codes in Appendix IV (see list below), the following certifications must be completed and the corresponding container numbers must be listed also. If the waste is packaged in lab packs and they include waste codes in Appendix IV, then table B (page 2) must be completed for those containers and the respective waste codes.

APPENDIX IV codes: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at 40 CFR 268.42 (c) (2). I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

Generator Signature

Date \_\_\_\_\_

Container Number:

E. Notification Statement: This waste must be treated to the applicable treatment standards set forth in 40 CFR 268 Subpart D, Section 268.32, or RCRA Section 3004 (d). Waste analysis is attached where available, otherwise the information herein is based upon my thorough knowledge of the waste(s). I hereby certify that the information provided is complete and accurate based on my knowledge of the materials.

*J. Summitt*  
Generator Signature

5-25-11  
Date



**ESSROC CEMENT CORPORATION (LDR Continued)**  
**Universal Treatment Standards Disclosure Form**

Underlying constituents for D001\*\* (low TOC, non-CWA), D002 (non-CWA, D012-D017 (nonwastewater), D018-D043 (non-CWA), and F039: The Waste material referenced in Section B exceeds the treatment standards for the hazardous constituents marked below.

☐ Check if none of the underlying hazardous constituents

Profile number: L000887

| Constituent  | NWW       | WW      | Constituent  | NWW     | WW        | Constituent  | NWW       | WW        |
|--|-----------|---------|--|---------|-----------|--|-----------|-----------|
| <input type="checkbox"/> Acenaphthylene                          | 3.4       | 0.059   | <input type="checkbox"/> Dichlorodifluoromethane             | 7.2     | 0.23      | <input type="checkbox"/> 5-Nitro-o-toluidine                   | 28        | 0.32      |
| <input type="checkbox"/> Acenaphthene                            | 3.4       | 0.059   | <input type="checkbox"/> 1,1-Dichloroethane                  | 6       | 0.059     | <input type="checkbox"/> o-Nitrophenol                         | 13        | 0.28      |
| <input type="checkbox"/> Acetone                                 | 160       | 0.28    | <input type="checkbox"/> 1,2-Dichloroethane                  | 6       | 0.21      | <input type="checkbox"/> p-Nitrophenol                         | 29        | 0.12      |
| <input type="checkbox"/> Acetonitrile                            | 1.8       | 5.6     | <input type="checkbox"/> 1,1-Dichloroethylene                | 6       | 0.025     | <input type="checkbox"/> N-Nitrosodimethylamine                | 28        | 0.4       |
| <input type="checkbox"/> Acetophenone                            | 9.7       | 0.01    | <input type="checkbox"/> trans-1,2-                          | 30      | 0.054     | <input type="checkbox"/> N-Nitrosodimethylamine                | 2.3       | 0.4       |
| <input type="checkbox"/> 2-Acetylaminofluorene                   | 140       | 0.059   | <input type="checkbox"/> 2,4-Dichlorophenol                  | 14      | 0.044     | <input type="checkbox"/> N-Nitroso-di-n-butylamine             | 17        | 0.4       |
| <input type="checkbox"/> Acrolein                                | NA        | 0.29    | <input type="checkbox"/> 2,6-Dichlorophenol                  | 14      | 0.044     | <input type="checkbox"/> N-Nitrosomethylethylamine             | 2.3       | 0.4       |
| <input type="checkbox"/> Acrylamide                              | 23        | 19      | <input type="checkbox"/> 1,2-Dichloropropane                 | 18      | 0.85      | <input type="checkbox"/> N-Nitrosomorpholine                   | 2.3       | 0.4       |
| <input type="checkbox"/> Acrylonitrile                           | 84        | 0.24    | <input type="checkbox"/> cis-1,3-                            | 18      | 0.036     | <input type="checkbox"/> N-Nitrosopiperidine                   | 35        | 0.13      |
| <input type="checkbox"/> Aldrin                                  | 0.066     | 0.021   | <input type="checkbox"/> trans-1,3-Dichloropropylene         | 18      | 0.036     | <input type="checkbox"/> N-Nitrosopyrrolidine                  | 35        | 0.13      |
| <input type="checkbox"/> 4-Aminodiphenyl                         | NA        | 0.13    | <input type="checkbox"/> Dieldrin                            | 0.13    | 0.017     | <input type="checkbox"/> Parathion                             | 4.6       | 0.14      |
| <input type="checkbox"/> Aniline                                 | 14        | 0.81    | <input type="checkbox"/> Diethyl phthalate                   | 28      | 0.2       | <input type="checkbox"/> Total PCBs(All Aroclors)              | 10        | 0.1       |
| <input type="checkbox"/> Anthracene                              | 3.4       | 0.059   | <input type="checkbox"/> 2,4-Dimethyl phenol                 | 14      | 0.036     | <input type="checkbox"/> Pentachlorobenzene                    | 10        | 0.55      |
| <input type="checkbox"/> Aramite                                 | NA        | 0.36    | <input type="checkbox"/> Dimethyl phthalate                  | 28      | 0.047     | <input type="checkbox"/> PeCDDs(Al PeCdDs)                     | 0.001     | 0.00      |
| <input type="checkbox"/> alpha-BHC                               | 0.066     | 0.00014 | <input type="checkbox"/> Di-n-butyl phthalate                | 28      | 0.057     | <input type="checkbox"/> PeCDFs(Al PeCdFs)                     | 0.001     | 0.00      |
| <input type="checkbox"/> beta-BHC                                | 0.066     | 0.00014 | <input type="checkbox"/> 1,4-Dinitrobenzene                  | 2.3     | 0.32      | <input type="checkbox"/> Pentachloroethane                     | 6         | 0.05      |
| <input type="checkbox"/> delta-BHC                               | 0.066     | 0.023   | <input type="checkbox"/> 4,6-Dinitro-o-cresol                | 160     | 0.28      | <input type="checkbox"/> Pentachloronitrobenzene               | 4.8       | 0.05      |
| <input type="checkbox"/> gamma-BHC                               | 0.066     | 0.0017  | <input type="checkbox"/> 2,4-Dinitrophenol                   | 160     | 0.12      | <input type="checkbox"/> Pentachlorophenol                     | 7.4       | 0.08      |
| <input type="checkbox"/> Benzene                                 | 10        | 0.14    | <input type="checkbox"/> 2,4-Dinitrotoluene                  | 140     | 0.32      | <input type="checkbox"/> Phenacetin                            | 16        | 0.08      |
| <input type="checkbox"/> Benz(a)anthracene                       | 3.4       | 0.059   | <input type="checkbox"/> 2,6-Dinitrotoluene                  | 28      | 0.55      | <input type="checkbox"/> Phenanthrene                          | 5.6       | 0.05      |
| <input type="checkbox"/> Benzal chloride                         | 6         | 0.055   | <input type="checkbox"/> Di-n-octyl phthalate                | 28      | 0.017     | <input type="checkbox"/> Phenol                                | 6.2       | 0.03      |
| <input type="checkbox"/> Benzo(b)fluoranthene                    | 6.8       | 0.11    | <input type="checkbox"/> p-Dimethylaminoazobenzene           | NA      | 0.13      | <input type="checkbox"/> Phorate                               | 4.6       | 0.02      |
| <input type="checkbox"/> Benzo(k)fluoranthene                    | 6.8       | 0.11    | <input type="checkbox"/> Di-n-propylnitrosamine              | 14      | 0.4       | <input type="checkbox"/> Phthalic acid                         | 28        | 0.05      |
| <input type="checkbox"/> Benzo(g,h,i)perylene                    | 1.8       | 0.0055  | <input type="checkbox"/> 1,4-Dioxane                         | 170     | NA        | <input type="checkbox"/> Phthalic anhydride                    | 28        | 0.05      |
| <input type="checkbox"/> Benzo(a)pyrene                          | 3.4       | 0.061   | <input type="checkbox"/> Diphenylamine                       | 13      | 0.92      | <input type="checkbox"/> Pronamide                             | 1.5       | 0.09      |
| <input type="checkbox"/> Bromodichloromethane                    | 15        | 0.35    | <input type="checkbox"/> Diphenylnitrosamine                 | 13      | 0.92      | <input type="checkbox"/> Pyrene                                | 0.2       | 0.06      |
| <input type="checkbox"/> Methyl bromide                          | 15        | 0.11    | <input type="checkbox"/> 1,2-Diphenylhydrazine               | NA      | 0.087     | <input type="checkbox"/> Pyridine                              | 1.6       | 0.01      |
| <input type="checkbox"/> (Bromomethane)                          |           |         | <input type="checkbox"/> Disulfoton                          | 6.2     | 0.017     | <input type="checkbox"/> Safrrole                              | 22        | 0.08      |
| <input type="checkbox"/> 4-Bromophenyl phenyl ether              | 15        | 0.55    | <input type="checkbox"/> Endosulfan I                        | 0.866   | 0.023     | <input type="checkbox"/> Silvex(2,4,5-TP)                      | 7.9       | 0.72      |
| <input type="checkbox"/> n-Butyl alcohol                         | 2.6       | 5.6     | <input type="checkbox"/> Endosulfan II                       | 0.13    | 0.029     | <input type="checkbox"/> 2,4,5-T(2,4,5-Trichlorophenol)        | 7.9       | 0.72      |
| <input type="checkbox"/> Butyl benzyl phthalate                  | 28        | 0.017   | <input type="checkbox"/> Endosulfan sulfate                  | 0.13    | 0.029     | <input type="checkbox"/> -oxyacetic acid)                      |           |           |
| <input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 2.5       | 0.066   | <input type="checkbox"/> Endrin                              | 0.13    | 0.0028    | <input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene            | 14        | 0.05      |
| <input type="checkbox"/> Carbon disulfide                        | 4.0 mg/l  | 3.8     | <input type="checkbox"/> Endrin aldehyde                     | 0.13    | 0.025     | <input type="checkbox"/> TCDDs(Al TCDDs)                       | 0.001     | 0.00      |
|  | TCLP      |         | <input type="checkbox"/> Ethyl acetate                       | 33      | 0.34      | <input type="checkbox"/> TCDFs(Al TCDFs)                       | 0.001     | 0.00      |
| <input type="checkbox"/> Carbon tetrachloride                    | 6         | 0.057   | <input type="checkbox"/> Ethyl cyanide (Propane-nitrile)     | 360     | 0.24      | <input type="checkbox"/> 1,1,1,2-Tetrachloroethane             | 6         | 0.05      |
| <input type="checkbox"/> Chlordane (alpha and gamma isomers)     | 0.26      | 0.0033  | <input type="checkbox"/> Ethyl benzene                       | 10      | 0.057     | <input type="checkbox"/> 1,1,2,2-Tetrachloroethane             | 6         | 0.05      |
| <input type="checkbox"/> p-Chloroaniline                         | 16        | 0.46    | <input type="checkbox"/> Ethyl ether                         | 160     | 0.12      | <input type="checkbox"/> Tetrachloroethylene                   | 6         | 0.05      |
| <input type="checkbox"/> Chlorobenzene                           | 6         | 0.057   | <input type="checkbox"/> bis(2-Ethylhexyl)                   | 28      | 0.28      | <input type="checkbox"/> 2,3,4,6-Tetrachlorophenol             | 7.4       | 0.03      |
| <input type="checkbox"/> Chlorobenzilate                         | NA        | 0.1     | <input type="checkbox"/> Ethyl methacrylate                  | 160     | 0.14      | <input type="checkbox"/> Toluene                               | 10        | 0.08      |
| <input type="checkbox"/> 2-chloro-1,3-butadiene                  | 0.28      | 0.057   | <input type="checkbox"/> Ethylene oxide                      | NA      | 0.12      | <input type="checkbox"/> Toxaphene                             | 2.6       | 0.00      |
| <input type="checkbox"/> Chlorodibromomethane                    | 15        | 0.057   | <input type="checkbox"/> Famphur                             | 15      | 0.017     | <input type="checkbox"/> Bromoform(Tribromomethane)            | 15        | 0.63      |
| <input type="checkbox"/> Chloroethane                            | 6         | 0.27    | <input type="checkbox"/> Fluoranthene                        | 3.4     | 0.068     | <input type="checkbox"/> 1,2,4-Trichlorobenzene                | 19        | 0.05      |
| <input type="checkbox"/> bis(2-Chloroethoxy)-methane             | 7.2       | 0.036   | <input type="checkbox"/> Fluorene                            | 3.4     | 0.059     | <input type="checkbox"/> 1,1,1-Trichloroethane                 | 6         | 0.05      |
| <input type="checkbox"/> bis(2-Chloroethyl)ether                 | 6         | 0.033   | <input type="checkbox"/> Heptachlor                          | 0.066   | 0.0012    | <input type="checkbox"/> 1,1,2-Trichloroethane                 | 6         | 0.05      |
| <input type="checkbox"/> Chloroform                              | 6         | 0.046   | <input type="checkbox"/> Heptachlor epoxide                  | 0.066   | 0.016     | <input type="checkbox"/> Trichloroethylene                     | 6         | 0.05      |
| <input type="checkbox"/> bis(2-Chloroisopropyl)-ether            | 7.2       | 0.055   | <input type="checkbox"/> Hexachlorobenzene                   | 10      | 0.055     | <input type="checkbox"/> Trichloromonofluoromethane            | 30        | 0.82      |
| <input type="checkbox"/> p-Chloro-m-cresol                       | 14        | 0.018   | <input type="checkbox"/> Hexachlorobutadiene                 | 5.6     | 0.055     | <input type="checkbox"/> 2,4,5-Trichlorophenol                 | 7.4       | 0.18      |
| <input type="checkbox"/> 2-Chloroethyl vinyl ether               | NA        | 0.062   | <input type="checkbox"/> Hexachlorocyclopentadiene           | 2.4     | 0.057     | <input type="checkbox"/> 2,4,6-Trichlorophenol                 | 7.4       | 0.03      |
| <input type="checkbox"/> Chloxomethane (Methyl chloride)         | 30        | 0.19    | <input type="checkbox"/> HxCDDs(Al HxCDDs)                   | 0.001   | 0.00063   | <input type="checkbox"/> 1,2,3-Trichloropropane                | 38        | 0.85      |
| <input type="checkbox"/> 2-Chloronaphthalene                     | 5.6       | 0.055   | <input type="checkbox"/> HxCDFs(Al HxCDFs)                   | 0.001   | 0.00063   | <input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane | 38        | 0.05      |
| <input type="checkbox"/> 2-Chlorophenol                          | 5.7       | 0.044   | <input type="checkbox"/> Hexachlorethane                     | 36      | 0.055     | <input type="checkbox"/> tris-(2,3-dibromopropyl)phosphate     | 0.1       | 0.11      |
| <input type="checkbox"/> 3-Chloropropylene                       | 30        | 0.036   | <input type="checkbox"/> Hexachloropropylene                 | 30      | 0.035     | <input type="checkbox"/> Vinyl chloride                        | 6         | 0.27      |
| <input type="checkbox"/> Chrysene                                | 3.4       | 0.059   | <input type="checkbox"/> Indeno(1,2,3-c,d)pyrene             | 3.4     | 0.0055    | <input type="checkbox"/> Xylenes-all mixed isomers             | 30        | 0.22      |
| <input type="checkbox"/> o-Cresol                                | 5.6       | 0.11    | <input type="checkbox"/> Iodomethane                         | 65      | 0.19      | <input type="checkbox"/> Antimony                              |           | 1.9       |
| <input type="checkbox"/> m-Cresol                                | 5.6       | 0.77    | <input type="checkbox"/> Isobutyl alcohol                    | 170     | 5.6       | <input type="checkbox"/> Arsenic                               | 5.0 mg/l  | TCLP 1.4  |
| <input type="checkbox"/> p-Cresol                                | 5.6       | 0.77    | <input type="checkbox"/> Isodrin                             | 0.066   | 0.021     | <input type="checkbox"/> Barium                                | 7.6 mg/l  | TCLP 1.2  |
| <input type="checkbox"/> Cyclohexanone                           | 0.75 mg/l | 0.36    | <input type="checkbox"/> Isosafrole                          | 2.6     | 0.081     | <input type="checkbox"/> Beryllium                             | 0.14 mg/l | TCLP 0.82 |
|  | TCLP      |         | <input type="checkbox"/> Kepone                              | 0.13    | 0.0011    | <input type="checkbox"/> Cadmium                               | 0.19 mg/l | TCLP 0.69 |
| <input type="checkbox"/> 1,2-dibromo-3-chloropropane             | 15        | 0.11    | <input type="checkbox"/> Methacrylonitrile                   | 84      | 0.24      | <input type="checkbox"/> Chromium (Total)                      | 0.86 mg/l | TCLP 2.77 |
| <input type="checkbox"/> Ethylene dibromide (1,2-Dibromoethane)  | 15        | 0.028   | <input type="checkbox"/> Methanol                            | 75 mg/l | TCLP 5.06 | <input type="checkbox"/> Cyanides (Total)*                     | 590       | 1.2       |
| <input type="checkbox"/> Dibromomethane                          | 15        | 0.11    | <input type="checkbox"/> Methapyrene                         | 1.5     | 0.081     | <input type="checkbox"/> Cyanides (Amenable)*                  | 30        | 0.06      |
| <input type="checkbox"/> 2,4-D (2,4-Dichlorophenoxyacetic acid)  | 10        | 0.72    | <input type="checkbox"/> Methoxychlor                        | 0.18    | 0.25      | <input type="checkbox"/> Fluoride                              | NA        | 35        |
| <input type="checkbox"/> o,p'-DDD                                | 0.087     | 0.023   | <input type="checkbox"/> 3-Methylcholanthrene                | 15      | 0.0055    | <input type="checkbox"/> Lead                                  | 0.37 mg/l | TCLP 0.69 |
| <input type="checkbox"/> p,p'-DDD                                | 0.087     | 0.023   | <input type="checkbox"/> 4,4-Methylene bis (2-chloroaniline) | 30      | 0.5       | <input type="checkbox"/> Mercury-non wastewater from Retort    | 0.20 mg/l | TCLP NA   |
| <input type="checkbox"/> o,p'-DDE                                | 0.087     | 0.031   | <input type="checkbox"/> Methylene chloride                  | 30      | 0.089     | <input type="checkbox"/> Mercury-All Others                    | 0.25 mg/l | TCLP 0.15 |
| <input type="checkbox"/> p,p'-DDE                                | 0.087     | 0.031   | <input type="checkbox"/> Methyl ethyl ketone                 | 36      | 0.28      | <input type="checkbox"/> Nickel                                | 5.0 mg/l  | TCLP 3.98 |
| <input type="checkbox"/> c,p'-DDT                                | 0.087     | 0.0039  | <input type="checkbox"/> Methyl isobutyl ketone              | 33      | 0.14      | <input type="checkbox"/> Selenium                              | 0.16 mg/l | TCLP 0.82 |
| <input type="checkbox"/> p,p'-DDT                                | 0.087     | 0.0039  | <input type="checkbox"/> Methyl methacrylate                 | 160     | 0.14      | <input type="checkbox"/> Silver                                | 0.30 mg/l | TCLP 0.43 |
| <input type="checkbox"/> Dibenz(a,h)anthracene                   | 0.2       | 0.055   | <input type="checkbox"/> Methyl                              | NA      | 0.018     | <input type="checkbox"/> Sulfide                               | NA        | 14        |
| <input type="checkbox"/> Dibenz(a,e)pyrene                       | NA        | 0.061   | <input type="checkbox"/> Methyl parathion                    | 4.6     | 0.014     | <input type="checkbox"/> Thallium                              | 0.70 mg/l | TCLP 1.4  |
| <input type="checkbox"/> m-Dichlorobenzene                       | 6         | 0.36    | <input type="checkbox"/> Naphthalene                         | 5.6     | 0.059     | <input type="checkbox"/> Vanadium                              | 0.23 mg/l | TCLP 4.3  |
| <input type="checkbox"/> o-Dichlorobenzene                       | 6         | 0.088   | <input type="checkbox"/> 2-Naphthylamine                     | NA      | 0.52      | <input type="checkbox"/> Zinc                                  | 5.3 mg/l  | TCLP 2.61 |
| <input type="checkbox"/> p-Dichlorobenzene                       | 6         | 0.09    | <input type="checkbox"/> o-Nitroaniline                      | 14      | 0.27      |  |           |           |
|  |           |         | <input type="checkbox"/> p-Nitroaniline                      | 28      | 0.028     |  |           |           |
|  |           |         | <input type="checkbox"/> Nitrobenzene                        | 14      | 0.068     |  |           |           |

(\*) Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using SW-846 Method 9010 or 9012 with a sample size 10 grams and a distillation time of 1 hour and 15 minutes.

(\*\*) The selection of D001 constituents is only required for low TOC ignitable liquids managed in non-CWA facilities.



**Essroc**

**Italcementi Group**

**Logansport, IN 46947**

# Certificate of Thermal Destruction

**EPA ID# :** INR000103655

**Generator :** STELLO PRODUCTS

**Address :** P.O. BOX 89

840 WEST HILLSIDE AVENUE

SPENCER, IN, USA 47450

**Contact :** JS

**Gentlemen :**

**Essroc Cement Corp. (IND005081542) has processed waste from:**

**STELLO PRODUCTS**

**As indicated on Manifest**

**007719753JJK**

**And hereby certifies that this waste was Thermally Destroyed at:**

**ESSROC's TSD Facility (IND 005 081 542)**

**Logansport, Indiana**

**Between**

**5/31/2011 and 6/1/2011**

**In the Amount of 1,200 lbs (150 gallons)**

**Date Load Received:** 5/31/2011

**Essroc Load Record Number:** 20-56733

**Environmental Manager**

**6/2/2011**

**Date**

| UNIFORM HAZARDOUS WASTE MANIFEST  |  | 1. Generator ID Number<br>NJ-0007100055  | 2. Page 1 of 1   | 3. Emergency Response Phone<br>800-424-9300 | 4. Manifest Tracking Number<br>007719753 JJK |                 |                  |
|---|--|--|--|---|--|-----------------|------------------|
| 5. Generator's Name and Mailing Address<br>STELLO PRODUCTS, INCORPORATED<br>P.O. BOX 88<br>SPENCER, IN 47460<br>Generator's Phone: 317-939-2366   |  |  | Generator's Site Address (if different than mailing address)<br>STELLO PRODUCTS, INCORPORATED<br>840 WEST HILLSIDE AVENUE<br>SPENCER, IN 47460 |   |  |                 |                  |
| 6. Transporter 1 Company Name<br>Liquid Waste Removal, Incorporated   |  |  | U.S. EPA ID Number<br>IN1383040450   |   |  |                 |                  |
| 7. Transporter 2 Company Name   |  |  | U.S. EPA ID Number   |   |  |                 |                  |
| 8. Designated Facility Name and Site Address<br>ESSROC CEMENT CORPORATION<br>3094 WEST COUNTY ROAD 225 SOUTH<br>LOGANSPORT, IN 46047<br>Facility's Phone: 317-317-5122  |  |  | U.S. EPA ID Number<br>IN1005031502   |   |  |                 |                  |
| GENERATOR   | 9a. HM   | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers<br>No. Type   |   | 11. Total Quantity                           | 12. Unit Wt/Vol | 13. Waste Codes  |
|   | X  | 1. NO. WASTE PAINT RELATED MATERIAL, 3 UNITS, 65 MG/L  | 003  | TT  | 150  | G               | D001, H002, P001 |
|   |  | 2.   |  |   |  |                 |                  |
|   |  | 3.   |  |   |  |                 |                  |
|   |  | 4.   |  |   |  |                 |                  |
| 14. Special Handling Instructions and Additional Information:<br>Appendix B, 1. 000000<br>E.R. Guide # 1. 128   |  |  |  |   |  |                 |                  |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. |  |  |  |   |  |                 |                  |
| Generator's/Offeror's Printed/Typed Name<br>J. J. K.  |  |  | Signature<br>J. J. K.  |   | Month Day Year<br>5 25 11                    |                 |                  |
| INT'L   | 16. International Shipments<br><input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____<br>Transporter signature (for exports only): _____ Date leaving U.S.: _____   |  |  |   |  |                 |                  |
|   | 17. Transporter Acknowledgment of Receipt of Materials<br>Transporter 1 Printed/Typed Name<br>Larry R. Blair Signature<br>Larry R. Blair Month Day Year<br>5 25 11<br>Transporter 2 Printed/Typed Name Signature Month Day Year  |  |  |   |  |                 |                  |
| DESIGNATED FACILITY   | 18. Discrepancy<br>18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection<br>Manifest Reference Number: _____ |  |  |   |  |                 |                  |
|   | 13b. Alternate Facility (or Generator) U.S. EPA ID Number<br>Facility's Phone: _____   |  |  |   |  |                 |                  |
|   | 18c. Signature of Alternate Facility (or Generator) Month Day Year   |  |  |   |  |                 |                  |
|   | 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)<br>1. H050 2. 3. 4.  |  |  |   |  |                 |                  |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a<br>Printed/Typed Name Rick Luciani Signature Rick Luciani Month Day Year 5 21 11   |  |  |  |   |  |                 |                  |

## **Appendix III**

### ***Purchase History***



# Stello Products, Inc. Vendor QuickReport

Madison Chemical

| Type                  | All Transactions  |             | Memo                        | Debit    |
|-----------------------|-------------------|-------------|-----------------------------|----------|
|                       | Date              | Num         |                             |          |
| <b>Purchase Order</b> | <b>10/20/2010</b> | <b>2530</b> |                             |          |
| Purchase Order        | 10/20/2010        | 2530        | 55 Gal Drum Dart 153        | 1,650.00 |
| Purchase Order        | 10/20/2010        | 2530        | 55 Gal Drum Neutralizer LCS | 654.50   |
| Purchase Order        | 10/20/2010        | 2530        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>11/01/2011</b> | <b>3074</b> |                             |          |
| Purchase Order        | 11/01/2011        | 3074        | 55 Gal Drum Dart 153        | 1,732.50 |
| Purchase Order        | 11/01/2011        | 3074        | 55 Gal Drum Neutralizer LCS | 687.50   |
| Purchase Order        | 11/01/2011        | 3074        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>09/20/2012</b> | <b>3534</b> |                             |          |
| Purchase Order        | 09/20/2012        | 3534        | 55 Gal Drum Dart 153        | 1,732.50 |
| Purchase Order        | 09/20/2012        | 3534        | 55 Gal Drum Neutralizer LCS | 687.50   |
| Purchase Order        | 09/20/2012        | 3534        | 55 Gal Drum Dart 169        | 924.00   |
| Purchase Order        | 09/20/2012        | 3534        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>07/19/2013</b> | <b>3948</b> |                             |          |
| Purchase Order        | 07/19/2013        | 3948        | 55 Gal Drum Dart 153        | 1,732.50 |
| Purchase Order        | 07/19/2013        | 3948        | 55 Gal Drum Neutralizer LCS | 687.50   |
| Purchase Order        | 07/19/2013        | 3948        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>11/20/2014</b> | <b>4950</b> |                             |          |
| Purchase Order        | 11/20/2014        | 4950        | 55 Gal Drum Dart 153        | 0.00     |
| Purchase Order        | 11/20/2014        | 4950        | 55 Gal Drum Neutralizer LCS | 0.00     |
| Purchase Order        | 11/20/2014        | 4950        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>01/07/2016</b> | <b>5817</b> |                             |          |
| Purchase Order        | 01/07/2016        | 5817        | 55 Gal Drum Dart 153        | 0.00     |
| Purchase Order        | 01/07/2016        | 5817        | 55 Gal Drum Neutralizer LCS | 0.00     |
| Purchase Order        | 01/07/2016        | 5817        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>05/31/2017</b> | <b>6725</b> |                             |          |
| Purchase Order        | 05/31/2017        | 6725        | 55 Gal Drum Dart 153        | 2,598.75 |
| Purchase Order        | 05/31/2017        | 6725        | 55 Gal Drum Neutralizer LCS | 687.50   |
| Purchase Order        | 05/31/2017        | 6725        | 55 Gal Drum Dart 169        | 924.00   |
| Purchase Order        | 05/31/2017        | 6725        | FREIGHT CHARGE              | 0.00     |
| <b>Purchase Order</b> | <b>03/22/2019</b> | <b>7716</b> |                             |          |
| Purchase Order        | 03/22/2019        | 7716        | 55 Gal Drum Dart 153        | 866.25   |

Stello Products, Inc.  
Purchase Orders for Nazdar Northeast  
All Transactions

| Num  | Date       | Delivery Date | Item                                     | Item Description        |
|------|------------|---------------|--|-------------------------|
| 2343 | 03/25/2010 | 03/25/2010    | 55 111 Black Paint                       |                         |
| 2357 | 04/06/2010 | 04/06/2010    | 59-111 Black (Black Paint 59-111)        |                         |
| 2360 | 04/08/2010 | 04/08/2010    | 59-112 White (59-112 White Paint)        |                         |
| 2360 | 04/08/2010 | 04/08/2010    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2374 | 04/21/2010 | 04/21/2010    | 59-112 White (59-112 White Paint)        | 59-112 White Paint      |
| 2377 | 04/21/2010 | 04/21/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2377 | 04/21/2010 | 04/21/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2389 | 05/06/2010 | 05/06/2010    | 59 111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2389 | 05/06/2010 | 05/06/2010    | UDC-2 (Emulsion Gal)                     | Emulsion Gal            |
| 2391 | 05/06/2010 | 05/06/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2391 | 05/06/2010 | 05/06/2010    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint |
| 2460 | 07/30/2010 | 07/30/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2460 | 07/30/2010 | 07/30/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2463 | 08/02/2010 | 08/02/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2463 | 08/02/2010 | 08/02/2010    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2531 | 10/20/2010 | 10/20/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2531 | 10/20/2010 | 10/20/2010    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2554 | 11/03/2010 | 11/03/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2554 | 11/03/2010 | 11/03/2010    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2573 | 11/19/2010 | 11/19/2010    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2573 | 11/19/2010 | 11/19/2010    | UDC-2 (Emulsion Gal)                     | Emulsion Gal            |
| 2642 | 01/28/2011 | 01/28/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2642 | 01/28/2011 | 01/28/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2649 | 02/07/2011 | 02/07/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2649 | 02/07/2011 | 02/07/2011    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint |
| 2656 | 02/11/2011 | 02/11/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2656 | 02/11/2011 | 02/11/2011    | UDC-2 (Emulsion Gal)                     | Emulsion Gal            |
| 2669 | 02/17/2011 | 02/17/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red)  | 59LF102 Gal Fire Red    |
| 2669 | 02/17/2011 | 02/17/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2674 | 02/23/2011 | 02/23/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2674 | 02/23/2011 | 02/23/2011    | N97LF20 (Brilliant Orange Paint)         | Brilliant Orange Paint  |
| 2720 | 03/22/2011 | 03/22/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2728 | 03/28/2011 | 03/28/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2728 | 03/28/2011 | 03/28/2011    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint |
| 2728 | 03/28/2011 | 03/28/2011    | N5500 (5500 Thinner (Gal))               | 5500 Thinner (Gal)      |
| 2728 | 03/28/2011 | 03/28/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2738 | 04/04/2011 | 04/04/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2738 | 04/04/2011 | 04/04/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2754 | 04/14/2011 | 04/14/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2754 | 04/14/2011 | 04/14/2011    | UDC-2 (Emulsion Gal)                     | Emulsion Gal            |
| 2826 | 05/18/2011 | 05/18/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2826 | 05/18/2011 | 05/18/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2836 | 05/24/2011 | 05/24/2011    | UDC-2 (Emulsion Gal)                     | Emulsion Gal            |
| 2836 | 05/24/2011 | 05/24/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2858 | 06/07/2011 | 06/07/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2858 | 06/07/2011 | 06/07/2011    | UDC-2 (Emulsion Gal)                     | Emulsion Gal            |
| 2870 | 06/18/2011 | 06/18/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2870 | 06/18/2011 | 06/18/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2870 | 06/18/2011 | 06/18/2011    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint |
| 2884 | 06/29/2011 | 06/29/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2884 | 06/29/2011 | 06/29/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2885 | 06/30/2011 | 06/30/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2885 | 06/30/2011 | 06/30/2011    | N5500 (5500 Thinner (Gal))               | 5500 Thinner (Gal)      |
| 2886 | 07/01/2011 | 07/01/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2886 | 07/01/2011 | 07/01/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2895 | 07/13/2011 | 07/13/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |
| 2895 | 07/13/2011 | 07/13/2011    | 59-111 Black (Black Paint 59-111)        | Black Paint 59-111      |
| 2913 | 07/27/2011 | 07/27/2011    | 59LF 102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red    |

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| 2913 | 07/27/2011 | 07/27/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 2913 | 07/27/2011 | 07/27/2011    | N5500 (5500 Thinner (Gal))              | 5500 Thinner (Gal)            |
| 2935 | 08/09/2011 | 08/09/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 2935 | 08/09/2011 | 08/09/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 2961 | 08/26/2011 | 08/26/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 2961 | 08/26/2011 | 08/26/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 2965 | 08/31/2011 | 08/31/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 2965 | 08/31/2011 | 08/31/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 2978 | 09/02/2011 | 09/02/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 2978 | 09/02/2011 | 09/02/2011    | 59LF124 (Nazdar Brilliant Orange (Gal)) | Nazdar Brilliant Orange (Gal) |
| 2999 | 09/19/2011 | 09/19/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 2999 | 09/19/2011 | 09/19/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 2999 | 09/19/2011 | 09/19/2011    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3007 | 09/23/2011 | 09/23/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3007 | 09/23/2011 | 09/23/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3017 | 09/28/2011 | 09/28/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3017 | 09/28/2011 | 09/28/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3028 | 10/04/2011 | 10/04/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3028 | 10/04/2011 | 10/04/2011    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                  |
| 3029 | 10/05/2011 | 10/05/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3040 | 10/13/2011 | 10/13/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3040 | 10/13/2011 | 10/13/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3040 | 10/13/2011 | 10/13/2011    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3046 | 10/14/2011 | 10/14/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3046 | 10/14/2011 | 10/14/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3073 | 11/01/2011 | 11/01/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3073 | 11/01/2011 | 11/01/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3105 | 11/28/2011 | 11/28/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3105 | 11/28/2011 | 11/28/2011    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3105 | 11/28/2011 | 11/28/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3141 | 12/13/2011 | 12/13/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3141 | 12/13/2011 | 12/13/2011    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3141 | 12/13/2011 | 12/13/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3141 | 12/13/2011 | 12/13/2011    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3159 | 01/05/2012 | 01/05/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3159 | 01/05/2012 | 01/05/2012    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3192 | 01/26/2012 | 01/26/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3192 | 01/26/2012 | 01/26/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3192 | 01/26/2012 | 01/26/2012    | 59LF124 (Nazdar Brilliant Orange (Gal)) | Nazdar Brilliant Orange (Gal) |
| 3221 | 02/24/2012 | 02/24/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3221 | 02/24/2012 | 02/24/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3221 | 02/24/2012 | 02/24/2012    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3261 | 03/19/2012 | 03/19/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3262 | 03/20/2012 | 03/20/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3262 | 03/20/2012 | 03/20/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3269 | 03/26/2012 | 03/26/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3269 | 03/26/2012 | 03/26/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint       |
| 3278 | 03/29/2012 | 03/29/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3278 | 03/29/2012 | 03/29/2012    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                  |
| 3278 | 03/29/2012 | 03/29/2012    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3330 | 04/26/2012 | 04/26/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3330 | 04/26/2012 | 04/26/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3330 | 04/26/2012 | 04/26/2012    | 5500 Thinner (Thinner 5500)             | Thinner 5500                  |
| 3353 | 05/14/2012 | 05/14/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3353 | 05/14/2012 | 05/14/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3371 | 05/29/2012 | 05/29/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3371 | 05/29/2012 | 05/29/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111            |
| 3371 | 05/29/2012 | 05/29/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3377 | 05/31/2012 | 05/31/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red          |
| 3377 | 05/31/2012 | 05/31/2012    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                  |

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| 3394 | 06/11/2012 | 06/11/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3397 | 06/15/2012 | 06/15/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3397 | 06/15/2012 | 06/15/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3397 | 06/15/2012 | 06/15/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3426 | 07/09/2012 | 07/09/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3426 | 07/09/2012 | 07/09/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3426 | 07/09/2012 | 07/09/2012    | 5550 R Thinner (5550 Retarder Thinner)  | 5550 Retarder Thinner        |
| 3431 | 07/12/2012 | 07/12/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3460 | 08/01/2012 | 08/01/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3460 | 08/01/2012 | 08/01/2012    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                 |
| 3462 | 08/01/2012 | 08/01/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3462 | 08/01/2012 | 08/01/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3462 | 08/01/2012 | 08/01/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3469 | 08/06/2012 | 08/06/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3473 | 08/08/2012 | 08/08/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3473 | 08/08/2012 | 08/08/2012    | 59LF 148 (Nazdar Med Green Paint (Gal)) | Nazdar Med Green Paint (Gal) |
| 3499 | 08/21/2012 | 08/21/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3499 | 08/21/2012 | 08/21/2012    | 5500 Thinner (Thinner 5500)             | Thinner 5500                 |
| 3499 | 08/21/2012 | 08/21/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3499 | 08/21/2012 | 08/21/2012    | 5550 R Thinner (5550 Retarder Thinner)  | 5550 Retarder Thinner        |
| 3500 | 08/21/2012 | 08/21/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3500 | 08/21/2012 | 08/21/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3508 | 08/24/2012 | 10/04/2011    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3516 | 09/04/2012 | 09/04/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3516 | 09/04/2012 | 09/04/2012    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                 |
| 3521 | 09/06/2012 | 09/06/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3521 | 09/06/2012 | 09/06/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3536 | 09/20/2012 | 09/20/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3536 | 09/20/2012 | 09/20/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3536 | 09/20/2012 | 09/20/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3536 | 09/20/2012 | 09/20/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3600 | 10/23/2012 | 10/23/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3600 | 10/23/2012 | 10/23/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3600 | 10/23/2012 | 10/23/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3600 | 10/23/2012 | 10/23/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3600 | 10/23/2012 | 10/23/2012    | 5500 Thinner (Thinner 5500)             | Thinner 5500                 |
| 3611 | 11/06/2012 | 11/06/2012    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3614 | 11/12/2012 | 11/12/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3614 | 11/12/2012 | 11/12/2012    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3614 | 11/12/2012 | 11/12/2012    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3700 | 01/22/2013 | 01/22/2013    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3700 | 01/22/2013 | 01/22/2013    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                 |
| 3717 | 02/04/2013 | 02/04/2013    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3717 | 02/04/2013 | 02/04/2013    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3717 | 02/04/2013 | 02/04/2013    | 5500 Thinner (Thinner 5500)             | Thinner 5500                 |
| 3717 | 02/04/2013 | 02/04/2013    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3739 | 02/18/2013 | 02/18/2013    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3755 | 03/04/2013 | 03/04/2013    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3755 | 03/04/2013 | 03/04/2013    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                 |
| 3789 | 03/27/2013 | 03/27/2013    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3789 | 03/27/2013 | 03/27/2013    | 5500 Thinner (Thinner 5500)             | Thinner 5500                 |
| 3802 | 04/01/2013 | 04/01/2013    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3803 | 04/03/2013 | 04/03/2013    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3803 | 04/03/2013 | 04/03/2013    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3826 | 04/19/2013 | 04/19/2013    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |
| 3846 | 05/01/2013 | 05/01/2013    | 59-204 B RED (59-204 Bright Red Paint)  | 59-204 Bright Red Paint      |
| 3846 | 05/01/2013 | 05/01/2013    | 5550 R Thinner (5550 Retarder Thinner)  | 5550 Retarder Thinner        |
| 3846 | 05/01/2013 | 05/01/2013    | UDC-2 (Emulsion Gal)                    | Emulsion Gal                 |
| 3889 | 06/12/2013 | 06/12/2013    | 59LF102 Fire Red (59LF102 Gal Fire Red) | 59LF102 Gal Fire Red         |
| 3889 | 06/12/2013 | 06/12/2013    | 59-111 Black (Black Paint 59-111)       | Black Paint 59-111           |

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| 3889 | 06/12/2013 | 06/12/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 3889 | 06/12/2013 | 06/12/2013    | 5550 R Thinner (5550 Retarder Thinner)             | 5550 Retarder Thinner                                 |
| 3890 | 06/12/2013 | 06/12/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 3902 | 06/19/2013 | 06/19/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 3902 | 06/19/2013 | 06/19/2013    | UDC-2 (Emulsion Gal)                               | Emulsion Gal  |
| 3911 | 06/25/2013 | 06/25/2013    | 59LF102 Fire Red (59LF102 Gal Fire Red)            | 59LF102 Gal Fire Red                                  |
| 3911 | 06/25/2013 | 06/25/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 3914 | 06/26/2013 | 06/26/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 3932 | 07/15/2013 | 07/15/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 3932 | 07/15/2013 | 07/15/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4007 | 08/21/2013 | 08/21/2013    | 59LF102 Fire Red (59LF102 Gal Fire Red)            | 59LF102 Gal Fire Red                                  |
| 4007 | 08/21/2013 | 08/21/2013    | UDC-2 (Emulsion Gal)                               | Emulsion Gal  |
| 4011 | 08/23/2013 | 08/23/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4011 | 08/23/2013 | 08/23/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4011 | 08/23/2013 | 08/23/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4049 | 09/12/2013 | 09/12/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4049 | 09/12/2013 | 09/12/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4049 | 09/12/2013 | 09/12/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4049 | 09/12/2013 | 09/12/2013    | 5550 R Thinner (5550 Retarder Thinner)             | 5550 Retarder Thinner                                 |
| 4056 | 09/18/2013 | 09/18/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4071 | 09/23/2013 | 09/23/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4099 | 10/15/2013 | 10/15/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4099 | 10/15/2013 | 10/15/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4099 | 10/15/2013 | 10/15/2013    | 5550 R Thinner (5550 Retarder Thinner)             | 5550 Retarder Thinner                                 |
| 4125 | 10/28/2013 | 10/28/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4125 | 10/28/2013 | 10/28/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4125 | 10/28/2013 | 10/28/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4198 | 11/25/2013 | 11/25/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4199 | 11/25/2013 | 11/25/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4199 | 11/25/2013 | 11/25/2013    | 5550 R Thinner (5550 Retarder Thinner)             | 5550 Retarder Thinner                                 |
| 4199 | 11/25/2013 | 11/25/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4199 | 11/25/2013 | 11/25/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4245 | 01/02/2014 | 12/27/2013    | 556004 (Nazdar 5560 Fast Thinner - for 5900 Series | Nazdar 5560 Fast Thinner - for 5900 Series Paints     |
| 4245 | 01/02/2014 | 12/27/2013    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4245 | 01/02/2014 | 12/27/2013    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4245 | 01/02/2014 | 12/27/2013    | UDC-2 (Emulsion Gal)                               | Emulsion Gal  |
| 4270 | 01/22/2014 | 01/22/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4270 | 01/22/2014 | 01/22/2014    | 556004 (Nazdar 5560 Fast Thinner - for 5900 Series | Nazdar 5560 Fast Thinner - for 5900 Series Paints     |
| 4270 | 01/22/2014 | 01/22/2014    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 St | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 4292 | 02/03/2014 | 02/03/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4294 | 02/04/2014 | 02/04/2014    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 St | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 4299 | 02/07/2014 | 02/07/2014    | UDC-2 (Emulsion Gal)                               | Emulsion Gal  |
| 4385 | 03/18/2014 | 03/18/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4385 | 03/18/2014 | 03/18/2014    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 St | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 4385 | 03/18/2014 | 03/18/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4385 | 03/18/2014 | 03/18/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4469 | 04/21/2014 | 04/21/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4469 | 04/21/2014 | 04/21/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4469 | 04/21/2014 | 04/21/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4501 | 04/24/2014 | 04/24/2014    | PEY195LE62 (Pecap Yellow 195 55-62 LE (screen n    | Pecap Yellow 195 55-62 LE (screen material)           |
| 4540 | 05/08/2014 | 05/08/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4540 | 05/08/2014 | 05/08/2014    | UDC-2 (Emulsion Gal)                               | Emulsion Gal  |
| 4573 | 05/21/2014 | 05/21/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4573 | 05/21/2014 | 05/21/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4682 | 07/22/2014 | 07/22/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4682 | 07/22/2014 | 07/22/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4682 | 07/22/2014 | 07/22/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |
| 4682 | 07/22/2014 | 07/22/2014    | UDC-2 (Emulsion Gal)                               | Emulsion Gal  |
| 4743 | 08/18/2014 | 08/18/2014    | 59-204 B RED (59-204 Bright Red Paint)             | 59-204 Bright Red Paint                               |
| 4743 | 08/18/2014 | 08/18/2014    | 59-111 Black (Black Paint 59-111)                  | Black Paint 59-111                                    |

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| 4743 | 08/18/2014 | 08/18/2014    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 4802 | 09/15/2014 | 04/24/2014    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 4869 | 10/14/2014 | 10/14/2014    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 4869 | 10/14/2014 | 10/14/2014    | PEY195LE62 (Pecap Yellow 195 55-62 LE (screen n Pecap Yellow 195 55-62 LE (screen material)              |                                      |
| 5051 | 01/12/2015 | 01/12/2015    | PEY195LE62 (Pecap Yellow 195 55-62 LE (screen n Pecap Yellow 195 55-62 LE (screen material)              |                                      |
| 5051 | 01/12/2015 | 01/12/2015    | UDC-2 (Emulsion Gal)   | Emulsion Gal                         |
| 5064 | 01/22/2015 | 01/22/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5093 | 02/03/2015 | 02/03/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5101 | 02/04/2015 | 02/04/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5101 | 02/04/2015 | 02/04/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5148 | 03/02/2015 | 03/02/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5155 | 03/03/2015 | 11/25/2013    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5197 | 03/20/2015 | 03/20/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5197 | 03/20/2015 | 03/20/2015    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 Se Nazdar 9050 Retarder Thinner - for 5900 Series Paints |                                      |
| 5214 | 03/25/2015 | 03/25/2015    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 5310 | 05/04/2015 | 05/04/2015    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 5310 | 05/04/2015 | 05/04/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5310 | 05/04/2015 | 05/04/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5314 | 05/05/2015 | 02/04/2015    | 59LF102 Fire Red (59LF102 Gal Fire Red)  | 59LF102 Gal Fire Red                 |
| 5365 | 06/03/2015 | 06/03/2015    | 59LF102 Fire Red (59LF102 Gal Fire Red)  | 59LF102 Gal Fire Red                 |
| 5365 | 06/03/2015 | 06/03/2015    | UDC-2 (Emulsion Gal)   | Emulsion Gal                         |
| 5373 | 06/09/2015 | 06/09/2015    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 5373 | 06/09/2015 | 06/09/2015    | 59LF-134 (Nazdar Enamel Plus Gloss Screen Paint - Nazdar Enamel Plus Gloss Screen Paint (Medium Yellow)  |                                      |
| 5469 | 07/09/2015 | 07/09/2015    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 Se Nazdar 9050 Retarder Thinner - for 5900 Series Paints |                                      |
| 5469 | 07/09/2015 | 07/09/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5526 | 08/04/2015 | 08/04/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5526 | 08/04/2015 | 08/04/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5526 | 08/04/2015 | 08/04/2015    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 Se Nazdar 9050 Retarder Thinner - for 5900 Series Paints |                                      |
| 5596 | 09/14/2015 | 11/25/2013    | 79LF2004 (Brilliant Orange -Gallon)  | Brilliant Orange -Gallon             |
| 5659 | 10/13/2015 | 10/13/2015    | 79LF2004 (Brilliant Orange -Gallon)  | Brilliant Orange -Gallon             |
| 5659 | 10/13/2015 | 10/13/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5671 | 10/20/2015 | 10/20/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5671 | 10/20/2015 | 10/20/2015    | UDC-2 (Emulsion Gal)   | Emulsion Gal                         |
| 5734 | 11/20/2015 | 11/20/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5734 | 11/20/2015 | 11/20/2015    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 5766 | 12/08/2015 | 12/08/2015    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5766 | 12/08/2015 | 12/08/2015    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))  | 9717 Fire Red Nazdar Paint (Per Gal) |
| 5771 | 12/10/2015 | 12/10/2015    | 79LF2004 (Brilliant Orange -Gallon)  | Brilliant Orange -Gallon             |
| 5771 | 12/10/2015 | 12/10/2015    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 5771 | 12/10/2015 | 12/10/2015    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) Nazdar Brilliant Orange Paint (per gallon)          |                                      |
| 5777 | 12/14/2015 | 12/14/2015    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) Nazdar Brilliant Orange Paint (per gallon)          |                                      |
| 5812 | 01/07/2016 | 01/07/2016    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) Nazdar Brilliant Orange Paint (per gallon)          |                                      |
| 5812 | 01/07/2016 | 01/07/2016    | 59-112 White (59-112 White Paint)  | 59-112 White Paint                   |
| 5836 | 01/20/2016 | 01/20/2016    | 59LF102 Fire Red (59LF102 Gal Fire Red)  | 59LF102 Gal Fire Red                 |
| 5836 | 01/20/2016 | 01/20/2016    | 9731 (9700 Series Retarder (9731) Per Gal )  | 9700 Series Retarder (9731) Per Gal  |
| 5869 | 02/04/2016 | 02/04/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))  | 9717 Fire Red Nazdar Paint (Per Gal) |
| 5889 | 02/16/2016 | 02/16/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))  | 9717 Fire Red Nazdar Paint (Per Gal) |
| 5889 | 02/16/2016 | 02/16/2016    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5974 | 03/29/2016 | 02/04/2016    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |
| 5974 | 03/29/2016 | 02/04/2016    | 59-204 B RED (59-204 Bright Red Paint)   | 59-204 Bright Red Paint              |
| 6066 | 05/16/2016 | 12/14/2015    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))  | 9717 Fire Red Nazdar Paint (Per Gal) |
| 6082 | 05/19/2016 | 05/19/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))  | 9717 Fire Red Nazdar Paint (Per Gal) |
| 6082 | 05/19/2016 | 05/19/2016    | 97PB6004 (Nazdar Stop Sign Red Paint (per gallon); Nazdar Stop Sign Red Paint (per gallon)               |                                      |
| 6097 | 05/27/2016 | 05/27/2016    | RE180 (Thinner)  | Thinner                              |
| 6097 | 05/27/2016 | 05/27/2016    | UDC-2 (Emulsion Gal)   | Emulsion Gal                         |
| 6108 | 06/03/2016 | 05/03/2016    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) Nazdar Brilliant Orange Paint (per gallon)          |                                      |
| 6108 | 06/03/2016 | 06/03/2016    | RE180 (Thinner)  | Thinner                              |
| 6131 | 06/13/2016 | 06/13/2016    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) Nazdar Brilliant Orange Paint (per gallon)          |                                      |
| 6131 | 06/13/2016 | 06/13/2016    | RE180 (Thinner)  | Thinner                              |
| 6131 | 06/13/2016 | 06/13/2016    | 59-111 Black (Black Paint 59-111)  | Black Paint 59-111                   |

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| 6168 | 06/30/2016 | 06/30/2016    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6168 | 06/30/2016 | 06/30/2016    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 Se   | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 6168 | 06/30/2016 | 06/30/2016    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6175 | 07/07/2016 | 07/07/2016    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6175 | 07/07/2016 | 07/07/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6175 | 07/07/2016 | 07/07/2016    | RE180 (Thinner)                                      | Thinner   |
| 6175 | 07/07/2016 | 07/07/2016    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6192 | 07/15/2016 | 07/15/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6216 | 08/01/2016 | 08/01/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6243 | 08/18/2016 | 08/18/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6243 | 08/18/2016 | 08/18/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6261 | 09/06/2016 | 09/06/2016    | RE180 (Thinner)                                      | Thinner   |
| 6261 | 09/06/2016 | 09/06/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6261 | 09/06/2016 | 09/06/2016    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6261 | 09/06/2016 | 09/06/2016    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6303 | 09/30/2016 | 09/30/2016    | RE180 (Thinner)                                      | Thinner   |
| 6303 | 09/30/2016 | 09/30/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6303 | 09/30/2016 | 09/30/2016    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6303 | 09/30/2016 | 09/30/2016    | RE180 (Thinner)                                      | Thinner   |
| 6320 | 10/14/2016 | 10/14/2016    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6341 | 10/26/2016 | 10/26/2016    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6341 | 10/26/2016 | 10/26/2016    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6382 | 11/28/2016 | 11/28/2016    | RE180 (Thinner)                                      | Thinner   |
| 6382 | 11/28/2016 | 11/28/2016    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 Se   | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 6441 | 01/04/2017 | 01/04/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6441 | 01/04/2017 | 01/04/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6441 | 01/04/2017 | 01/04/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6441 | 01/04/2017 | 01/04/2017    | RE180 (Thinner)                                      | Thinner   |
| 6502 | 02/06/2017 | 02/06/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6502 | 02/06/2017 | 02/06/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6502 | 02/06/2017 | 02/06/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6502 | 02/06/2017 | 02/06/2017    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 Se   | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 6573 | 03/06/2017 | 03/06/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6573 | 03/06/2017 | 03/06/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6573 | 03/06/2017 | 03/06/2017    | RE180 (Thinner)                                      | Thinner   |
| 6573 | 03/06/2017 | 03/06/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6685 | 05/02/2017 | 05/02/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6685 | 05/02/2017 | 05/02/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6685 | 05/02/2017 | 05/02/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6707 | 05/16/2017 | 05/16/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6707 | 05/16/2017 | 05/16/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6707 | 05/16/2017 | 05/16/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6740 | 06/07/2017 | 06/07/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6740 | 06/07/2017 | 06/07/2017    | UDC-2 (Emulsion Gal)                                 | Emulsion Gal  |
| 6749 | 06/09/2017 | 06/09/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6749 | 06/09/2017 | 06/09/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6770 | 06/20/2017 | 06/20/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6775 | 06/23/2017 | 06/23/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6775 | 06/23/2017 | 06/23/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6787 | 06/29/2017 | 06/29/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6829 | 07/21/2017 | 07/21/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 6829 | 07/21/2017 | 07/21/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6900 | 09/12/2017 | 09/12/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6900 | 09/12/2017 | 09/12/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6900 | 09/12/2017 | 09/12/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6900 | 09/12/2017 | 09/12/2017    | RE180 (Thinner)                                      | Thinner   |
| 6921 | 09/27/2017 | 09/27/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6921 | 09/27/2017 | 09/27/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6921 | 09/27/2017 | 09/27/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6927 | 10/02/2017 | 10/02/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |



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| 6927 | 10/02/2017 | 10/02/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 6927 | 10/02/2017 | 10/02/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 6931 | 10/05/2017 | 10/05/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6931 | 10/05/2017 | 10/05/2017    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 6942 | 10/12/2017 | 10/12/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6942 | 10/12/2017 | 10/12/2017    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 6942 | 10/12/2017 | 10/12/2017    | RE180 (Thinner)                                      | Thinner   |
| 6945 | 10/17/2017 | 10/17/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 6945 | 10/17/2017 | 10/17/2017    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 S    | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 6945 | 10/17/2017 | 10/17/2017    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7007 | 11/20/2017 | 11/20/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7007 | 11/20/2017 | 11/20/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7007 | 11/20/2017 | 11/20/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7007 | 11/20/2017 | 11/20/2017    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 7050 | 12/14/2017 | 12/14/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7050 | 12/14/2017 | 12/14/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7050 | 12/14/2017 | 12/14/2017    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7050 | 12/14/2017 | 12/14/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7050 | 12/14/2017 | 12/14/2017    | RE180 (Thinner)                                      | Thinner   |
| 7069 | 12/22/2017 | 12/22/2017    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7069 | 12/22/2017 | 12/22/2017    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7086 | 01/15/2018 | 01/15/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7086 | 01/15/2018 | 01/15/2018    | UDC-2 (Emulsion Gal)                                 | Emulsion Gal  |
| 7089 | 01/16/2018 | 12/14/2015    | RE180 (Thinner)                                      | Thinner   |
| 7095 | 01/19/2018 | 01/19/2018    | RE180 (Thinner)                                      | Thinner   |
| 7095 | 01/19/2018 | 01/19/2018    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7095 | 01/19/2018 | 01/19/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7095 | 01/19/2018 | 01/19/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7095 | 01/19/2018 | 01/19/2018    | RE180 (Thinner)                                      | Thinner   |
| 7127 | 02/13/2018 | 02/13/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7127 | 02/13/2018 | 02/13/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7135 | 02/20/2018 | 02/20/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7135 | 02/20/2018 | 02/20/2018    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 7144 | 02/27/2018 | 02/27/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7144 | 02/27/2018 | 02/27/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7165 | 03/09/2018 | 03/09/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7191 | 04/04/2018 | 04/04/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7191 | 04/04/2018 | 04/04/2018    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7191 | 04/04/2018 | 04/04/2018    | RE180 (Thinner)                                      | Thinner   |
| 7225 | 04/26/2018 | 04/26/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7225 | 04/26/2018 | 04/26/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7311 | 06/27/2018 | 06/27/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7311 | 06/27/2018 | 06/27/2018    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                    |
| 7311 | 06/27/2018 | 06/27/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7311 | 06/27/2018 | 06/27/2018    | 905004 (Nazdar 9050 Retarder Thinner - for 5900 S    | Nazdar 9050 Retarder Thinner - for 5900 Series Paints |
| 7318 | 07/03/2018 | 07/03/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                               |
| 7318 | 07/03/2018 | 07/03/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7318 | 07/03/2018 | 07/03/2018    | RE180 (Thinner)                                      | Thinner   |
| 7363 | 08/13/2018 | 08/13/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7363 | 08/13/2018 | 08/13/2018    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)            |
| 7363 | 08/13/2018 | 08/13/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                  |
| 7377 | 08/17/2018 | 08/17/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7377 | 08/17/2018 | 08/17/2018    | UDC-2 (Emulsion Gal)                                 | Emulsion Gal  |
| 7399 | 08/30/2018 | 08/30/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7399 | 08/30/2018 | 08/30/2018    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                      |
| 7399 | 08/30/2018 | 08/30/2018    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                              |
| 7399 | 08/30/2018 | 08/30/2018    | 795204 (Black- -Gallon)                              | Black- -Gallon  |
| 7424 | 09/17/2018 | 09/17/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon   |
| 7424 | 09/17/2018 | 09/17/2018    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                      |
| 7424 | 09/17/2018 | 09/17/2018    | 795204 (Black- -Gallon)                              | Black- -Gallon  |

**Stello Products, Inc.**  
**Purchase Orders for Nazdar Northeast**  
**All Transactions**

| Num          | Date       | Delivery Date | Item   | Item Description                                    |
|--------------|------------|---------------|--|---|
| 7424         | 09/17/2018 | 09/17/2018    | 79LF 2004 (Brilliant Orange -Gallon)                 | Brilliant Orange -Gallon                            |
| 7435         | 09/25/2018 | 09/25/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon |
| 7435         | 09/25/2018 | 09/25/2018    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)          |
| 7435         | 09/25/2018 | 09/25/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7435         | 09/25/2018 | 09/25/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon |
| 7463         | 10/09/2018 | 10/09/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7463         | 10/09/2018 | 10/09/2018    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7463         | 10/09/2018 | 10/09/2018    | 79LF 2004 (Brilliant Orange -Gallon)                 | Brilliant Orange -Gallon                            |
| 7473         | 10/16/2018 | 10/16/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon |
| 7487         | 10/22/2018 | 10/22/2018    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon |
| 7487         | 10/22/2018 | 10/22/2018    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                            |
| 7487         | 10/22/2018 | 10/22/2018    | 795204 (Black- Gallon)                               | Black- Gallon                                       |
| 7487         | 10/22/2018 | 10/22/2018    | RE180 (Thinner)                                      | Thinner   |
| 7487         | 10/22/2018 | 10/22/2018    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)          |
| 7506         | 10/29/2018 | 10/29/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7506         | 10/29/2018 | 10/29/2018    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                            |
| 7506         | 10/29/2018 | 10/29/2018    | 795204 (Black- Gallon)                               | Black- Gallon                                       |
| 7506         | 10/29/2018 | 10/29/2018    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)          |
| 7506         | 10/29/2018 | 10/29/2018    | RE180 (Thinner)                                      | Thinner   |
| 7508         | 10/29/2018 | 10/29/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7508         | 10/29/2018 | 10/29/2018    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                             |
| 7564         | 12/04/2018 | 12/04/2018    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7564         | 12/04/2018 | 12/04/2018    | RE180 (Thinner)                                      | Thinner   |
| 7613         | 01/09/2019 | 01/09/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7631         | 01/21/2019 | 01/21/2019    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7631         | 01/21/2019 | 01/21/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7631         | 01/21/2019 | 01/21/2019    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                            |
| 7640         | 01/29/2019 | 01/09/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7651         | 02/06/2019 | 02/06/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7651         | 02/06/2019 | 02/06/2019    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7651         | 02/06/2019 | 02/06/2019    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                            |
| 7651         | 02/06/2019 | 02/06/2019    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon |
| 7651         | 02/06/2019 | 02/06/2019    | RE180 (Thinner)                                      | Thinner   |
| 7653         | 02/07/2019 | 02/07/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7653         | 02/07/2019 | 02/07/2019    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                            |
| 7653         | 02/07/2019 | 02/07/2019    | 795204 (Black- Gallon)                               | Black- Gallon                                       |
| 7653         | 02/07/2019 | 02/07/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7653         | 02/07/2019 | 02/07/2019    | RE180 (Thinner)                                      | Thinner   |
| 7674         | 02/18/2019 | 02/18/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7674         | 02/18/2019 | 02/18/2019    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)          |
| 7718         | 03/25/2019 | 03/25/2019    | RE180 (Thinner)                                      | Thinner   |
| 7718         | 03/25/2019 | 03/25/2019    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7718         | 03/25/2019 | 03/25/2019    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)          |
| 7718         | 03/25/2019 | 03/25/2019    | RE180 (Thinner)                                      | Thinner   |
| 7718         | 03/25/2019 | 03/25/2019    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                             |
| 7754         | 04/17/2019 | 04/17/2019    | 791904 (Fire Red -Gallon)                            | Fire Red -Gallon                                    |
| 7754         | 04/17/2019 | 04/17/2019    | 59-204 B RED (59-204 Bright Red Paint)               | 59-204 Bright Red Paint                             |
| 7754         | 04/17/2019 | 04/17/2019    | 59-111 Black (Black Paint 59-111)                    | Black Paint 59-111                                  |
| 7812         | 06/04/2019 | 06/04/2019    | 79LF2004 (Brilliant Orange -Gallon)                  | Brilliant Orange -Gallon                            |
| 7812         | 06/04/2019 | 06/04/2019    | 9719Fire (9717 Fire Red Nazdar Paint (Per Gal))      | 9717 Fire Red Nazdar Paint (Per Gal)                |
| 7812         | 06/04/2019 | 06/04/2019    | 97LF2004 (Nazdar Brilliant Orange Paint (per gallon) | Nazdar Brilliant Orange Paint (per gallon)          |
| 7812         | 06/04/2019 | 06/04/2019    | 9724 (Black Paint for Plastic (9700 Series) By the G | Black Paint for Plastic (9700 Series) By the Gallon |
| 7812         | 06/04/2019 | 06/04/2019    | RE180 (Thinner)                                      | Thinner   |
| <b>Total</b> |            |               |  |   |

10:17 AM

06/04/19

Stello Products, Inc.  
**Bills for Liquid Waste Removal, Inc.**  
All Transactions

| Type  | Num   | Date       | Due Date   | Item | Item Description | Aging | Amount          |
|-------|-------|------------|------------|------|------------------|-------|-----------------|
| Bill  | 24649 | 08/04/2016 | 09/03/2016 |      |                  |       | 442.40          |
| Bill  | 21709 | 06/01/2016 | 06/01/2016 |      |                  |       | 884.80          |
| Bill  | 21799 | 02/10/2016 | 03/26/2016 |      |                  |       | 544.00          |
| Bill  | 11558 | 06/24/2014 | 07/16/2014 |      |                  |       | 319.20          |
| Bill  | 7708  | 09/25/2013 | 10/08/2013 |      |                  |       | 117.60          |
| Bill  | 6191  | 06/22/2013 | 07/10/2013 |      |                  |       | 117.60          |
| Bill  | 726   | 06/14/2012 | 07/09/2012 |      |                  |       | 1,276.80        |
| Bill  | 81809 | 04/03/2012 | 04/17/2012 |      |                  |       | 319.20          |
| Bill  | 78604 | 06/07/2011 | 06/21/2011 |      |                  |       | 319.20          |
| Total |       |            |            |      |                  |       | <u>4,440.80</u> |

**Stello Products, Inc.**  
**Purchase Orders for Superior Solvents & Chemicals**  
 January 1, 2012 through June 1, 2019

## Superior Solvents

| Num  | Date       | Delivery Date | Item   | Item Description              |
|------|------------|---------------|--|-------------------------------|
| 3193 | 01/27/2012 | 01/27/2012    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 3193 | 01/27/2012 | 01/27/2012    | Xylene (Xylene 55 Gal Drum)                      | Xylene 55 Gal Drum            |
| 3264 | 03/20/2012 | 03/20/2012    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 3264 | 03/20/2012 | 03/20/2012    | Mineral Sp 1 Gal (1.55 Gal Drum Mineral Spirits) | 1.55 Gal Drum Mineral Spirits |
| 3369 | 05/29/2012 | 05/29/2012    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 3481 | 08/01/2012 | 08/01/2012    | Methyl Ethyl Ketone (Methyl Ethyl Ketone)        | Methyl Ethyl Ketone           |
| 3550 | 09/28/2012 | 09/28/2012    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 3597 | 05/01/2013 | 05/01/2013    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 3847 | 05/01/2013 | 05/01/2013    | Xylene (Xylene 55 Gal Drum)                      | Xylene 55 Gal Drum            |
| 3903 | 06/19/2013 | 06/19/2013    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 3923 | 06/19/2013 | 06/19/2013    | Drums (Empty Open Head Drums)                    | Empty Open Head Drums         |
| 4009 | 08/21/2013 | 08/21/2013    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4101 | 10/16/2013 | 10/16/2013    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4101 | 10/16/2013 | 10/16/2013    | Methyl Ethyl Ketone (Methyl Ethyl Ketone)        | Methyl Ethyl Ketone           |
| 4195 | 11/22/2013 | 11/22/2013    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4384 | 03/17/2014 | 03/17/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4519 | 05/01/2014 | 05/01/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4519 | 05/01/2014 | 05/01/2014    | Methyl Ethyl Ketone (Methyl Ethyl Ketone)        | Methyl Ethyl Ketone           |
| 4599 | 06/03/2014 | 06/03/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4685 | 07/22/2014 | 07/22/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4792 | 09/10/2014 | 09/10/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 4798 | 09/12/2014 | 09/12/2014    | Xylene (Xylene 55 Gal Drum)                      | Xylene 55 Gal Drum            |
| 4916 | 11/10/2014 | 11/10/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5055 | 01/15/2015 | 01/15/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5247 | 04/08/2015 | 04/08/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5417 | 06/24/2015 | 06/24/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5584 | 08/24/2015 | 08/24/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5573 | 09/01/2015 | 09/01/2015    | Methyl Ethyl Ketone (Methyl Ethyl Ketone)        | Methyl Ethyl Ketone           |
| 5700 | 11/04/2015 | 11/04/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5857 | 02/04/2016 | 11/04/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5991 | 04/05/2016 | 11/04/2015    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 5096 | 05/28/2016 | 09/12/2014    | Xylene (Xylene 55 Gal Drum)                      | Xylene 55 Gal Drum            |
| 6096 | 05/26/2016 | 09/12/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6197 | 07/18/2016 | 07/18/2016    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6244 | 09/22/2016 | 09/01/2015    | Methyl Ethyl Ketone (Methyl Ethyl Ketone)        | Methyl Ethyl Ketone           |
| 6289 | 09/09/2016 | 09/12/2014    | Xylene (Xylene 55 Gal Drum)                      | Xylene 55 Gal Drum            |
| 6369 | 09/09/2016 | 09/12/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6360 | 11/03/2016 | 11/01/2016    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6476 | 01/26/2017 | 01/26/2017    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6592 | 03/15/2017 | 03/15/2017    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6684 | 05/01/2017 | 09/12/2014    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6870 | 07/18/2017 | 07/18/2017    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 6952 | 10/19/2017 | 10/19/2017    | S-0211 (Solvent Blend 1 Drum @ 55 Gal)           | Solvent Blend 1 Drum @ 55 Gal |
| 6961 | 10/26/2017 | 10/26/2017    | Xylene (Xylene 55 Gal Drum)                      | Xylene 55 Gal Drum            |
| 7021 | 11/30/2017 | 11/30/2017    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 7232 | 05/02/2018 | 05/02/2018    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 7280 | 06/07/2018 | 06/07/2018    | Toluene 1 Gal (1.55 Gal Drum Toluene)            | 1.55 Gal Drum Toluene         |
| 7290 | 06/11/2018 | 06/11/2018    | S-0211 (Solvent Blend 1 Drum @ 55 Gal)           | Solvent Blend 1 Drum @ 55 Gal |
| 7446 | 09/06/2018 | 09/06/2018    | S-0211 (Solvent Blend 1 Drum @ 55 Gal)           | Solvent Blend 1 Drum @ 55 Gal |
| 7641 | 01/29/2019 | 09/06/2018    | S-0211 (Solvent Blend 1 Drum @ 55 Gal)           | Solvent Blend 1 Drum @ 55 Gal |
| 7731 | 04/01/2019 | 09/06/2018    | S-0211 (Solvent Blend 1 Drum @ 55 Gal)           | Solvent Blend 1 Drum @ 55 Gal |

Jan 1, '12 - Jun 1, '19

| <b>3M INK Purchases</b>                    | <b>2013</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>Total \$\$</b> | <b>Total</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------|--------------|
| MYF : MISC - 700/1700 SER PROCESS PASTE    | 11          | 5           | 2           |             |             |             |             | \$326.50          | 18           |
| MYG : MISC - 840/880 SERIES PROCESS PASTE  | 106         | 136         | 161         | 127         | 107         | 75          | 49          | \$22,114.83       | 761          |
| 882I RED GAL PROCESS COLOR GALLON          |             |             | 50          | 38          | 38          | 26          |             | \$6,912.74        | 152          |
| 882I RED PROCESS COLOR GAL                 |             |             |             |             |             | 9           | 17          | \$1,297.46        | 26           |
| 882N TRAF SIGN RED PROCESS COLOR GAL       | 26          | 39          | 12          |             | 8           |             | 4           | \$4,004.86        | 89           |
| 883I BLUE GAL PROCESS COLOR GALLON         |             |             |             | 1           |             | 2           |             | \$164.39          | 3            |
| 883N BLUE GAL PROCESS COLOR GALLON         | 2           | 1           |             |             |             |             |             | \$179.20          | 3            |
| 885I BLACK PROCESS COLOR GAL               |             |             |             |             |             | 11          | 13          | \$595.10          | 24           |
| 885I BLK GAL PROCESS COLOR GALLON          |             |             | 53          | 56          | 37          | 17          |             | \$3,563.72        | 163          |
| 885N BLACK PROCESS COLOR GAL               | 59          | 73          | 16          | 1           | 8           |             |             | \$3,195.81        | 157          |
| 885N BLACK PROCESS COLOR GAL               |             |             |             |             |             |             | 4           | \$102.22          | 4            |
| 887I BRN GAL PROCESS COLOR GALLON          |             |             | 1           | 1           |             |             |             | \$184.84          | 2            |
| 888I GREEN PROCESS COLOR GAL               |             |             |             |             |             | 1           |             | \$48.68           | 1            |
| 888I GRN GAL PROCESS COLOR GALLON          |             |             |             | 5           |             |             |             | \$206.79          | 5            |
| 888N GRN GAL PROCESS COLOR GALLON          | 4           | 3           | 2           |             |             |             |             | \$441.10          | 9            |
| 891I CLEAR THINNER GAL                     |             |             |             |             |             |             | 3           | \$41.67           | 3            |
| 891I THINNER GAL                           | 7           |             | 5           | 2           | 4           | 2           |             | \$198.22          | 20           |
| 892 FLOW ADDITIVE (8-OZ CAN)               |             |             |             |             |             | 3           | 8           | \$126.18          | 11           |
| 892 FLOW ADDITIVE 8-OZ CAN                 | 8           | 20          | 22          | 23          | 12          | 4           |             | \$851.85          | 89           |
| MYP : MISC - 990 SERIES PROCESS PASTE      | 24          | 42          | 33          | 31          | 5           | 19          | 20          | \$5,853.60        | 174          |
| 990-03 BLU SCOTCHLITE PROCESS COLOR XX GAL |             | 2           |             | 1           |             |             |             | \$137.85          | 3            |
| 990-04 YLW SCOTCHLITE PROCESS COLOR XX GAL | 2           |             |             |             |             |             |             | \$73.94           | 2            |
| 990-05 BLACK PROCESS COLOR GAL             |             |             |             |             |             | 2           | 8           | \$253.12          | 10           |
| 990-05 BLK PROCESS COLOR GAL               | 11          | 18          | 13          | 18          | 4           | 4           |             | \$1,480.83        | 68           |
| 990-06 ORG SCOTCHLITE PROCESS COLOR XX GAL | 2           |             |             |             |             |             |             | \$73.94           | 2            |
| 990-12 RED PROCESS COLOR GAL               |             |             |             |             |             | 10          | 10          | \$993.18          | 20           |
| 990-12 RED PROCESS COLOR XX GAL            | 5           | 18          | 19          | 10          | 1           | 2           |             | \$2,608.93        | 55           |
| 991 THINNER GAL                            |             |             |             |             |             | 1           | 2           | \$49.81           | 3            |
| 991 THINNER/RETARDER GAL                   | 4           | 4           | 1           | 2           |             |             |             | \$182.00          | 11           |
| Grand Total                                | 141         | 183         | 196         | 158         | 112         | 94          | 69          | \$28,294.93       | 953          |

## **Appendix IV**

### ***Hazard Communication Standard***

# STELLO PRODUCTS HAZARD COMMUNICATION PROGRAM

## 1. Company Policy

To ensure that information about the dangers of all hazardous chemicals used by Stello Products is known by all affected employees, the following written hazard communication program has been established. Under this program, you will be informed of the contents of the OSHA Hazard Communication Standard, the hazardous properties of chemicals with which you work, safe handling procedures and measures to take to protect yourself from these chemicals.

This program applies to all work operations in our company where you may be exposed to hazardous chemicals under normal working conditions or during an emergency situation. All work units of this company will participate in the Hazard Communication Program. Copies of the Written Hazard Communication Program are available in the office for review by any interested employee.

Todd Zellers is the hazard communication program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.

## 2. Container Labeling

Greg Summerlot shall ensure that all containers of hazardous chemical products received for use are labeled with the identity of the hazardous chemical (i.e., brand or trade name), appropriate hazard warnings, and the name and address of the manufacturer, importer or other responsible party.

The Greg Summerlot will ensure that all secondary or portable containers into which chemical products are transferred are labeled with either an extra copy of the original label or with labels marked with the identity and the appropriate hazard warning. For help with labeling, see Todd Zellers.

## 3. Material Safety Data Sheets (MSDSs)

The office manager/Todd Zellers is responsible for establishing and monitoring the company MSDS program. He/she will ensure that procedures are developed to obtain the necessary MSDSs and will review incoming MSDSs for new or significant health and safety information. He/she will see that any new information is communicated to affected employees.

If an MSDS is not received with the initial shipment of a product that is labeled as hazardous, Todd Zellers/office manager shall obtain the appropriate MSDS from the manufacturer, distributor, importer or other responsible party



as soon as possible.

Copies of MSDSs for all hazardous chemicals to which employees are exposed or are potentially exposed will be kept in ring binder posted near Greg Summerlot's desk.

MSDSs will be readily available to all employees during each work shift. MSDSs shall be maintained in the ring binder near Greg Summerlot's desk.

If an MSDS for a particular hazardous product is not available, contact office manager/Todd Zellers.

When revised MSDSs are received, the following procedures will be followed to replace old MSDSs and inform employees of significant new health and safety information:  
Replaced in ring binder and updated during safety meeting.

#### **4. Employee Training and Information**

Todd Zellers/Greg Summerlot are responsible for the Employee Information and Training Program and will ensure that all program elements are carried out.

Everyone who works with or is potentially exposed to hazardous chemicals will receive information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area.

The information and training program shall address the following elements:

- The requirements of the OSHA Hazard Communication Standard
- Any operations in their work areas where hazardous chemicals are present
- The location and availability of this Written Hazard Communication Program
- How to detect the presence or release of hazardous chemicals in the work area
- The physical and health hazards of the chemicals in the work area
- The measures employees can take to protect themselves from these hazards, including specific procedures implemented by this company, such as appropriate work practices, emergency procedures, and personal protective equipment to be used
- The details of this Written Hazard Communication Program
- An explanation of how to read labels and MSDSs to obtain hazard information
- Location of the MSDSs and this Written Hazard Communication Program and how employees can obtain and use this information.

The training format will be as follows:  
Break room safety meeting.

## **5. List of Hazardous Chemicals**

A list of all known hazardous chemicals used by our employees is attached to this Written Hazard Communication Program. This list includes the identity (i.e., trade or brand name) of the chemical product, consistent with the identity of the chemical product used on the MSDS. Additional information on each chemical product may be obtained from the MSDSs, located in ring binder above Greg Summerlot's desk.

When new chemical products are received, this list will be updated (including date the chemicals were introduced) within 30 days. To ensure any new chemical product is added in a timely manner, the following procedures shall be followed:

Addition to MSDS binder. Communication in safety meeting.

The list of hazardous chemicals is compiled and maintained by Todd Zellers/Office Manager.

## **6. Availability of the Written Hazard Communication Program**

A copy of this Written Hazard Communication Program, including the list of hazardous chemicals, will be made available, upon request, to employees and their representatives.

## **Appendix V**

### ***Lease Agreement and Property Deed***

## COMMERCIAL LEASE AGREEMENT

**THIS COMMERCIAL LEASE AGREEMENT** (Lease) is entered into on this 4<sup>th</sup> day of Sept 2007, by and between John A. Hackworthy (Landlord) and Stello Products, Inc. (Tenant). Landlord is the owner of land and improvements whose address is 840 W. Hillside Ave., Spencer, Indiana 47460 and is more particularly described in Exhibit A attached hereto.

Landlord desires to lease the Leased Premises to Tenant, and Tenant desires to lease the Leased Premises from Landlord for the term, at the rental and upon the provisions set forth herein.

**THEREFORE**, in consideration of the mutual promises contained herein, and for other good and valuable consideration, it is agreed:

### Term.

The Initial Term of the Lease shall begin on the 1<sup>st</sup> day of September 2007 and end on the 31<sup>st</sup> day of August 2008. The parties hereby acknowledge that the Tenant is already in possession of the leased premises.

Tenant may renew the Lease for terms of one (1) year each under the same conditions set forth herein so long as Landlord remains the owner of the controlling shares of common stock of the Tenant. At such time as Landlord no longer owns the controlling interest in the common stock of the Tenant, Tenant's right to renew the terms of the lease shall cease and new terms shall be negotiated between Landlord and Tenant. Tenant shall exercise such renewal option, if at all, by providing written notice to Landlord not less than ninety (90) days prior to the expiration of the Initial Term. The renewal term shall be at the rental set forth below and otherwise upon the same covenants, conditions and provisions as contained in this Lease.

### Rent.

Tenant shall pay to Landlord during the Initial Term rent of Seven Thousand Two Hundred Dollars (\$7,200.00) per year, payable in installments of Six Hundred Dollars (\$600.00) per month. Each installment payment shall be due in advance on the first day of each calendar month during the lease term to Landlord at P.O. Box 89, Spencer, Indiana 47460 or at such other address as Landlord may direct from time to time.

Landlord requires no "Security Deposit" under the terms of the Lease. The rental for any renewal lease term, if created as permitted under this Lease, shall be Seven Thousand Two Hundred Dollars (\$7,200.00) per year payable in installments of Six Hundred Dollars (\$600.00) per month so long as Landlord is the owner of the controlling interest in the common shares of stock of the Tenant.

### **Uses and Prohibitions on Use.**

Landlord and Tenant mutually understand and agree that Tenant has physically occupied the leased premises for several years and used the same for manufacturing purposes. The parties hereto agree that Tenant shall continue to use the premises for the manufacturing of its products as in the past and that such usage may include the storing, manufacturing or selling of explosive, flammable or other inherently dangerous substances, chemicals, things or devices.

Tenant hereby agrees to make no usage of the leased premises that violates or is prohibited by any Federal, State or Local law, ordinance, rule or regulation.

### **Sublease and Assignment.**

Tenant shall have no right without Landlord's consent, to assign this Lease, whole or in part, to any third party without the prior written consent of the Landlord.

### **Repairs.**

During the Lease term, Tenant shall be responsible for and make, at Tenant's expense, all necessary repairs to the Leased Premises. Repairs shall include such items as repair to floors, walls, ceilings, roof, sidewalks, driveways, plumbing and sewers, heating, ventilation and cooling systems, etc.

### **Alterations and Improvements.**

Tenant, at Tenant's expense, shall have the right, upon obtaining Landlord's consent, to remodel, redecorate, and make additions, improvements and replacements of and to all or any part of the Leased Premises from time to time as Tenant may deem desirable, provided the same are made in a workmanlike manner and utilizing good quality materials. Tenant shall have the right to place and install personal property, trade fixtures, equipment and other temporary installations in and upon the Leased Premises, and fasten the same to the premises. All personal property, equipment, machinery, trade fixtures and temporary installations, whether acquired by Tenant at the commencement of the Lease term or placed or installed on the Leased Premises by Tenant thereafter, shall remain Tenant's property free and clear of any claim by Landlord. Tenant shall have the right to remove the same at any time during the term of this Lease provided that Tenant shall repair, at Tenant's expense, all damage to the Leased Premises caused by such removal.

### **Property Taxes.**

Tenant shall pay, prior to delinquency, all general real estate taxes and installments of special assessments coming due during the Lease term on the Leased Premises, and all personal property tax with respect to Tenant's personal property, if any, on the Leased Premises. Taxes statements shall continue to be sent to Landlord, however, Tenant shall make payment of any such taxes or assessments due directly to the governmental entity entitled to such payment and shall provide proof of payment to the Landlord. Landlord shall deliver such tax statements to Tenant within three (3) days of the receipt thereof.

**Insurance.**

If the Leased Premises is damaged by fire or other casualty resulting from any act of negligence by Tenant or by any act of negligence of Tenant's agents, employees or invitees, rent shall not be diminished or abated while such damages are under repair.

Tenant shall maintain fire and extended coverage insurance on the Building and the Leased Premises in such amount as Landlord and Tenant mutually deem appropriate. Landlord shall be named as an additional insured under the terms of any such policy. A certificate of insurance evidencing such insurance shall be provided to Landlord at the time of execution hereof and with each renewal of this lease agreement.

Tenant shall be responsible, at its expense, for fire and extended coverage insurance on all of its personal property, including removable trade fixtures, located in the Leased Premises.

Tenant shall, at its own expense, maintain a policy or policies of comprehensive general liability insurance in the sum of no less than \$ 1,000,000 covering the Tenant's use and control of the leased premises. Such insurance policy shall be issued by and binding upon an insurance company approved by Landlord, and shall afford minimum protection of not less than \$ 1,000,000 combined single limit coverage of bodily injury, property damage or combination thereof. Such policy or policies shall name the Landlord as an additional insured there under. A certificate of insurance evidencing such insurance shall be provided to Landlord at the time of execution hereof and with each renewal of this lease agreement.

**Utilities.**

Tenant shall pay all charges for water, sewer, gas, electricity, telephone and other services and utilities used by Tenant on the Leased Premises during the term of this Lease unless otherwise expressly agreed in writing by Landlord.

**Signs.**

Following Landlord's consent, Tenant shall have the right to place on the Leased Premises, at locations selected by Tenant, any signs which are permitted by applicable zoning ordinances and private restrictions. Landlord may refuse consent to any proposed signage that is in Landlord's opinion too large, deceptive, unattractive or otherwise inconsistent with or inappropriate to the Leased Premises. Landlord shall assist and cooperate with Tenant in obtaining any necessary permission from governmental authorities or adjoining owners and occupants for Tenant to place or construct the foregoing signs. Tenant shall repair all damage to the Leased Premises resulting from the removal of signs installed by Tenant.

**Entry.**

Landlord, upon giving reasonable notice, shall have the right to enter upon the Leased Premises to inspect the same, provided Landlord shall not thereby unreasonably interfere with Tenant's business on the Leased Premises.

**Parking.**

During the term of this Lease, Tenant shall have the exclusive use in common with Landlord of the non-reserved common automobile parking areas, driveways, and footways, subject to rules and regulations for the use thereof as prescribed from time to time by Landlord. Landlord reserves the right to designate parking areas for Tenant and Tenant's agents and employees.

**Building Rules.**

Tenant will comply with the rules of the Building adopted and altered by Landlord from time to time and will cause all of its agents, employees, invitees and visitors to do so; all changes to such rules will be sent by Landlord to Tenant in writing. The initial rules for the Building are attached hereto as Exhibit B and incorporated herein for all purposes.

**Damage and Destruction.**

If the Leased Premises or any part thereof or any appurtenance thereto is so damaged by fire, casualty or structural defects, such damage or defects not being the result of any act of negligence by Tenant or by any of Tenant's agents, employees or invitees, that the same cannot be used for Tenant's purposes, then Tenant shall have the right within ninety (90) days following damage to elect by notice to Landlord to terminate this Lease as of the date of such damage. In the event of minor damage to any part of the Leased Premises, and if such damage does not render the Leased Premises unusable for Tenant's purposes, Landlord shall promptly repair such damage at the cost of the Landlord. In making the repairs called for in this paragraph, Landlord shall not be liable for any delays resulting from strikes, governmental restrictions, inability to obtain necessary materials or labor or other matters which are beyond the reasonable control of Landlord. Tenant shall be relieved from paying rent and other charges during any portion of the Lease term that the Leased Premises are inoperable or unfit for occupancy, or use, in whole or in part, for Tenant's purposes. Rentals and other charges paid in advance for any such periods shall be credited on the next ensuing payments, if any, but if no further payments are to be made, any such advance payments shall be refunded to Tenant. The provisions of this paragraph extend not only to the matters aforesaid, but also to any occurrence which is beyond Tenant's reasonable control and which renders the Leased Premises, or any appurtenance thereto, inoperable or unfit for occupancy or use, in whole or in part, for Tenant's purposes.

**Default.**

In the event of a default made by Tenant in the payment of rent when due to Landlord, Tenant shall have fifteen (15) days after receipt of written notice thereof to cure such default. In the event of a default made by Tenant in any of the other covenants or conditions to be kept, observed and performed by Tenant, Tenant shall have thirty (30) days after receipt of written notice thereof to cure such default. In the event that the Tenant shall fail to cure any default within the time allowed under this paragraph, Landlord may declare the term of this Lease ended and terminated by giving Tenant written notice of such intention, and if possession of the Leased Premises is not surrendered, Landlord may reenter said premises. Landlord shall have, in addition to the remedy above provided, any other right or remedy available to Landlord on account of any Tenant default, either in law or equity. Landlord shall use reasonable efforts to



mitigate its damages. Landlord shall be entitled to recover from Tenant any and all expenses and costs, including reasonable attorney's fees, incurred by Landlord in the enforcement of the terms of this agreement.

**Quiet Possession.**

Landlord covenants and warrants that upon performance by Tenant of its obligations hereunder, Landlord will keep and maintain Tenant in exclusive, quiet, peaceable and undisturbed and uninterrupted possession of the Leased Premises during the term of this Lease.

**Condemnation.**

If any legally, constituted authority condemns the Building or such part thereof which shall make the Leased Premises unsuitable for leasing, this Lease shall cease when the public authority takes possession, and Landlord and Tenant shall account for rental as of that date. Such termination shall be without prejudice to the rights of either party to recover compensation from the condemning authority for any loss or damage caused by the condemnation. Neither party shall have any rights in or to any award made to the other by the condemning authority.

**Subordination.**

Tenant accepts this Lease subject and subordinate to any mortgage, deed of trust or other lien presently existing or hereafter arising upon the Leased Premises, or upon the Building and to any renewals, refinancing and extensions thereof, but Tenant agrees that any such mortgagee shall have the right at any time to subordinate such mortgage, deed of trust or other lien to this Lease on such terms and subject to such conditions as such mortgagee may deem appropriate in its discretion. Landlord is hereby irrevocably vested with full power and authority to subordinate this Lease to any mortgage, deed of trust or other lien now existing or hereafter placed upon the Leased Premises of the Building. Tenant agrees that it will from time to time upon request by Landlord execute and deliver to such persons as Landlord shall request a statement in recordable form certifying that this Lease is unmodified and in full force and effect (or if there have been modifications, that the same is in full force and effect as so modified), stating the dates to which rent and other charges payable under this Lease have been paid, stating that Landlord is not in default hereunder (or if Tenant alleges a default stating the nature of such alleged default) and further stating such other matters as Landlord shall reasonably require.

**Security Deposit.**

It is agreed and understood that no security deposit is anticipated or required as a part of this lease agreement.

**Notice.**

Any notice required or permitted under this Lease shall be deemed sufficiently given or served if sent by United States certified mail, return receipt requested, addressed as follows:

Landlord: John A. Hackworthy, P.O. Box 89, Spencer, Indiana 47460.

Tenant: Todd Zellers, 106 Deer Creek Hills, Greencastle, Indiana 46135

Landlord and Tenant shall each have the right from time to time to change the place notice is to be given under this paragraph by written notice thereof to the other party.

**Waiver.**

No waiver of any default of Landlord or Tenant hereunder shall be implied from any omission to take any action on account of such default if such default persists or is repeated, and no express waiver shall affect any default other than the default specified in the express waiver and that only for the time and to the extent therein stated. One or more waivers by Landlord or Tenant shall not be construed as a waiver of a subsequent breach of the same covenant, term or condition.

**Memorandum of Lease.**

Landlord and Tenant shall execute a Memorandum of Lease to be recorded for the purpose of giving record notice of the appropriate provisions of this Lease.

**Headings.**

The headings used in this Lease are for convenience of the parties only and shall not be considered in interpreting the meaning of any provision of this Lease.

**Successors.**

The provisions of this Lease shall extend to and be binding upon Landlord and Tenant and their respective legal representatives, successors and assigns.

**Consent.**

Landlord shall not unreasonably withhold or delay its consent with respect to any matter for which Landlord's consent is required or desirable under this Lease.

**Performance.**

If there is a default with respect to any of Landlord's covenants, warranties or representations under this Lease, and if the default continues more than fifteen (15) days after notice in writing from Tenant to Landlord specifying the default, Tenant may, at its option and without affecting any other remedy hereunder, cure such default and deduct the cost thereof from the next accruing installment or installments of rent payable hereunder until Tenant shall have been fully reimbursed for such expenditures, together with interest thereon at a rate equal to the lesser of five percent (5%) per annum or the then highest lawful rate. If this Lease terminates prior to Tenant's receiving full reimbursement, Landlord shall pay the un-reimbursed balance plus accrued interest to Tenant on demand.

**Compliance with Law.**

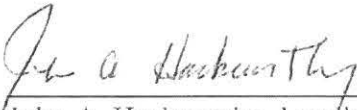
Tenant and Landlord each shall comply with all laws, orders, ordinances and other public requirements now or hereafter affecting the Leased Premises.

**Final Agreement.**

This Agreement terminates and supersedes all prior understandings or agreements on the subject matter hereof. This Agreement may be modified only by a further writing that is duly executed by both parties.

**IN WITNESS WHEREOF**, the parties have executed this Lease as of the day and year first above written.

LANDLORD



John A. Hackworthy, Landlord

TENANT  
STELLO PRODUCTS, INC.

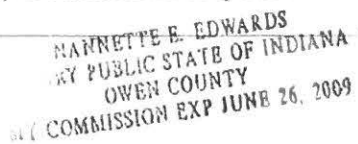
By:   
Todd Zellers, President

STATE OF INDIANA       )  
                                      ) SS:  
COUNTY OF OWEN       )

4th day of Sept, 2007 by John A. Hackworthy.

Witness my hand and notarial seal.

My Commission Expires:

  
NANNETTE E. EDWARDS  
NOTARY PUBLIC STATE OF INDIANA  
OWEN COUNTY  
COMMISSION EXP JUNE 26, 2009

  
\_\_\_\_\_, Notary Public  
Residing in Owen County, Indiana

STATE OF INDIANA       )  
                                  ) SS:  
COUNTY OF OWEN       )

Subscribed and sworn to before me, a notary public in and for said county and state, this  
\_\_\_\_ day of \_\_\_\_\_, 2007 by Todd Zellers in his capacity as President of Stello Products,  
Inc.

Witness my hand and notarial seal.

My Commission Expires:

\_\_\_\_\_.

\_\_\_\_\_, Notary Public  
Residing in Owen County, Indiana

Prepared by: Jack R. Woodruff, Attorney At Law, P.O. Box 46, Spencer, Indiana 47460 (812) 829-2221

60-10-20-500-400.106-02A

JULIE BANDY 2P  
OWEN COUNTY RECORDER  
IN 160633 DE 219/98  
PF Date 04/11/2005 Time 10:47:19  
DOCUMENT: 16.00

COPY

DULY ENTERED

APR 11 2005

Auditor Owen County  
*Angie Lawson*

Mail Tax Statement to:  
John A. Hackworthy  
Park Hill Estates  
Spencer, IN 47460

PERSONAL REPRESENTATIVE'S DEED

Patricia Hackworthy, as Personal Representatives of the Estate of David C. Hackworthy, Deceased, which estate is pending in Dane County, Wisconsin, under Cause No. \_\_\_\_\_

for good and sufficient consideration, conveys to: John A. Hackworthy, the following described real estate in Owen County, State of Indiana, to-wit:

Commencing at a point which is 245 feet West of the Northeast corner of Lot No. 21 in Beem's Second Addition to the Town of Spencer, Indiana, said point being on the North line of Lot No. 22 in said addition, and running thence East 170 feet to the Northwest corner of said Lot Number 21 and thence continuing East on the North line of said Lot No. 21, 30 feet for a total distance of 200 feet from the place of beginning; thence South 146 feet, more or less, to the center of the alley; thence West 200 feet to a point 146 feet South of the place of beginning; thence North to the place of beginning, being a part of Lots 21 and 22 in Beem's Second Addition to the Town of Spencer.

Grantee herein assumes and agrees to pay the taxes for the year 2004 due and payable in May, 2005 and any and all taxes and assessments becoming due thereafter.

Subject to any and all utility easements, highway rights of way, encumbrances and other observable or recorded restrictions, conditions and limitations.

The undersigned states that she is the court appointed and acting Personal Representative and the surviving unremarried spouse of David C. Hackworthy and that David C. Hackworthy died on May 24, 2003 and at the date of his death he was a resident of Dane County, Wisconsin.

IN WITNESS WHEREOF, the said Patricia Hackworthy, as Personal Representative of the Estate of David C. Hackworthy, Deceased, has hereunto set her hand and seal this \_\_\_\_\_ day of October, 2004.

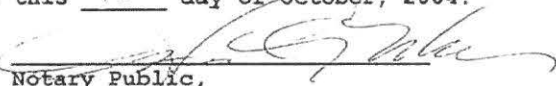
*Patricia Hackworthy*  
Patricia Hackworthy, Personal Representative of the Estate of David C. Hackworthy

STATE OF WISCONSIN, COUNTY OF DANE, SS: Before me, the undersigned, a Notary Public, in and for said County and State, personally appeared Patricia Hackworthy as Personal Representative of the Estate of David C. Hackworthy, Deceased and acknowledged the execution of said deed to be her voluntary act and deed for the uses and purposes expressed therein.

Exhibit A

Witness my hand and seal this 15 day of October, 2004.  
My Commission Expires:

5/7/2006

  
Notary Public,  
Residing in Owen Co., IN

THIS INSTRUMENT PREPARED BY: John J. Fuhs #7014-60, PETRI & FUHS Attorneys  
at Law 59 East Franklin Street/P.O.Box 107 Spencer, IN 47460 812/829-4848



Parcel No. \_\_\_\_\_

100812

## WARRANTY DEED

THIS INDENTURE WITNESSETH, That LESTER E. LEWIS and MARY P. LEWIS,  
Husband and Wife (Grantor)  
of Owen County, in the State of Indiana, CONVEY  
AND WARRANT to JOHN A. HACKWORTHY and DAVID C. HACKWORTHY  
(Grantee)  
of Owen County, in the State of Indiana, for the sum  
of One Dollars (\$ 1.00 ) and other  
valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the following  
described real estate in Owen County, State of Indiana:

Lots Numbered 19, 20 and 45 feet off the East side of Lot Numbered 21,  
all in Beem's Second Addition to the Town of Spencer, Indiana,  
together with the vacated alley running in a north and south direction  
between Lots Numbered 19 and 20 of Beem's Second Addition, the real  
estate herein described being adjacent on the East to the real estate  
heretofore conveyed to the said Hackworthys by Spencer Improvement  
Corporation known as the "Stello Building".

### RECEIVED FOR RECORD

This 15<sup>th</sup> day of April 1994  
at 2:05 o'clock P M  
and recorded in Deed record no. 172 P 599

Anna Jax Franklin

Recorder Owen County

### DULY ENTERED FOR TAXATION

APR 14 1994

Lois Biles  
Auditor Owen County

Subject to any and all easements, agreements and restrictions of record. The address of such  
real estate is commonly known as \_\_\_\_\_

Tax bills should be sent to Grantee at such address unless otherwise indicated below.

IN WITNESS WHEREOF, Grantor has executed this deed this 27<sup>th</sup> day of  
September, 1990.

Grantor: (SEAL)  
Signature Lester E. Lewis  
Printed Lester E. Lewis

Grantor: (SEAL)  
Signature Mary P. Lewis  
Printed Mary P. Lewis

STATE OF INDIANA  
COUNTY OF MORGAN

SS: ACKNOWLEDGMENT

Before me, a Notary Public in and for said County and State, personally appeared \_\_\_\_\_  
Lester E. Lewis and Mary P. Lewis, husband and wife  
who acknowledged the execution of the foregoing Warranty Deed, and who, having been duly  
sworn, stated that any representations therein contained are true.

Witness my hand and Notarial Seal this 27th day of September, 1990.  
My commission expires: 6/2/94

Signature Sharon Kitchens  
Printed Sharon Kitchens, Notary Public  
Resident of Morgan County, Indiana.

This instrument prepared by Timothy C. Currens, Attorney at Law.

Return deed to \_\_\_\_\_

Send tax bills to \_\_\_\_\_



## WARRANTY DEED

This indenture witnesseth that Spencer Improvement Corporation

37446

of Owen County in the State of Indiana

Convey and warrant to John A. Hackworthy and David C. Hackworthy

of Owen County in the State of Indiana  
for and in consideration of One Dollar (\$1.00) and Other Valuable Consideration  
the receipt whereof is hereby acknowledged, the following Real Estate in Owen County  
in the State of Indiana, to wit:

Commencing at a point which is 245 feet West of the northeast corner of Lot No. 21 in Beem's Second Addition to the Town of Spencer, Indiana, said point being on the north line of Lot No. 22 in said addition, and running thence east 170 feet to the northwest corner of said lot number 21 and thence continuing east on the north line of said Lot No. 21 30 feet for a total distance of 200 feet from the place of beginning; thence south 146 feet, more or less, to the center of the alley; thence west 200 feet to a point 146 feet south of the place of beginning; thence north to the place of beginning, being a part of Lots 21 and 22 in Beem's Second Addition to the Town of Spencer.

Grantees assume and agree to pay the 2nd installment of 1975 tax payable in 1976.

DULY ENTERED FOR TAXATION

THIS 15 DAY OF Aug. 1975

RECEIVED FOR RECORD

this 15th day of Aug. 1975  
at 2:30 o'clock P.M.

And recorded in 128 record no. pp. 361

Auditor, Owen County

Owen County Recorder

State of Indiana, OWEN County, ss:

Before me, the undersigned, a Notary Public in and for said County and State, this 12th day of August 1975 personally appeared:

Spencer Improvement Corporation, by  
Lester E. Lewis, its President and  
Elliott Hickam, its Secretary

And acknowledged the execution of the foregoing deed. In witness whereof, I have hereunto subscribed my name and affixed my official seal. My commission expires May 10 1977

Gail Ann Souders, Notary Public

Dated this 12th Day of August 1975

SPENCER IMPROVEMENT CORPORATION

By Lester E. Lewis, President Seal

By Elliott Hickam, Secretary Seal

Seal

Seal

Seal

Seal

This instrument prepared by Elliott Hickam Attorney at Law

MAIL TO:

COPYRIGHT THE ALLEN COUNTY INDIANA BAR ASSOCIATION, INC. 1957

361

## **Appendix VI**

### ***Building Drawing***

STELLO PRODUCTS BUILDING MAP -- 840 West Hillside Ave.

